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DIRECTOR OF INDUSTRIES
Bengal.

BULLETIN

OF THE

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WHOLESALE PRICES, 1890 TO 1907.

In 1901 the Bureau of Labor collected data relating to the wholesale prices of the principal staple commodities sold in the United States for the period from 1890 to 1901, inclusive. The actual prices for the 12 years and the relative prices computed therefrom were published in Bulletin 39, issued in March, 1902. The purpose of the investigation was to furnish a continuous record of wholesale prices and to show the changes in the general price level from year to year. The investigation thus begun has been continued each year and the results published in the March issue of the Bulletin to show actual prices for the year immediately preceding and relative prices for the period since 1890. The present Bulletin contains actual prices for 1907 and relative prices for the 18 years from 1890 to 1907. In these reports wholesale prices have been presented for a large number of carefully selected representative staple articles secured in representative markets of the United States. That it would be impossible to secure prices for all articles in all markets is so apparent that the fact hardly need be stated. In the present report prices are given for 258 representative articles. With a very few exceptions these articles are the same as have been covered in the preceding reports on this subject. Retail prices of food, which indicate better than wholesale prices of food the changes in cost of living, are published in the July Bulletin of each year.

The present investigation shows that wholesale prices, considering the 258 commodities as a whole, reached a higher level in 1907 than at any other time during the 18-year period covered. The average for the year 1907 was 5.7 per cent higher than for 1906; 44.4 per cent higher than for 1897, the year of lowest prices during the 18-year period; and 29.5 per cent higher than the average for the 10 years from 1890 to 1899. Prices reached their highest point during the 18-year period in October, 1907, the average for that month being

1.2 per cent higher than the average for the year 1907 and 2.8 per cent higher than the average for December, 1906, the month of highest prices in 1906.

An examination of the prices of the various articles covered by the investigation shows that while there was a large average increase for the year taken as a whole the increase in price did not extend to all commodities. Of the 258 articles for which wholesale prices were obtained 172 showed an increase in the average price for 1907 as compared with 1906, 35 showed no change in the average price for the year, and 51 showed a decrease in price. The following table divides the articles for which prices were secured into nine groups and shows for each group the number of articles covered, the per cent of increase in the average price for 1907 as compared with that for 1906 for each group as a whole, and the number of articles that increased or decreased in price:

PER CENT OF INCREASE IN AVERAGE PRICES FOR 1907 AS COMPARED WITH AVERAGE PRICES FOR 1906, AND NUMBER OF ARTICLES THAT INCREASED OR DECREASED IN PRICE, BY GROUPS OF COMMODITIES

Group.	Number of commodities	Per cent of increase in price.	Number of commodities showing—		
			Increase.	No change in price.	Decrease.
Farm products	16	10.9	11	....	5
Food, etc	53	4.6	34	6	13
Cloths and clothing	75	5.6	54	11	10
Fuel and lighting	13	2.4	7	1	5
Metals and implements	38	6.1	25	6	7
Lumber and building materials	27	4.9	21	1	5
Drugs and chemicals	9	8.3	4	3	2
House furnishing goods	14	6.8	8	6	....
Miscellaneous	13	5.0	8	1	4
All commodities	258	5.7	172	35	51

From the above table it is seen that when the commodities are considered by groups all of the nine groups showed an increase in price in 1907 as compared with 1906. In farm products, taken as a whole, there was an increase in price of 10.9 per cent in 1907 over the average price for 1906, this increase being greater than in any other one of the nine groups. There was an increase in price in 11 of the 16 articles for which prices were obtained. All of the staple grains, cotton, hay, and hops showed a decided increase in price. The articles that showed a decrease in the average price for the year were sheep, hogs, and hides, which decrease in the average price for the year resulted from the fall in price during the last two months of the year.

Food as a whole increased 4.6 per cent in the average price for 1907 as compared with 1906. In this group, 34 articles increased in price, 6 showed no change, and 13 decreased in price. Among the articles showing an increase were beef, flour, butter, milk, cheese, rice, meal, eggs, lard, and sugar. No change took place in the price of bread. The principal articles showing a decrease were coffee, potatoes, mutton, beans, prunes, and evaporated apples. Some of the varieties of pork and fish showed a slight increase in the average price for the year, while other varieties showed a slight decrease.

Of the 75 articles included under cloths and clothing, 54 showed an increase in price, 11 showed no change, and 10 showed a decrease. In the group as a whole there was an average increase of 5.6 per cent in price, the principal increase being in cotton goods and silk.

In fuel and lighting as a group there was an increase in price of 2.4 per cent. Petroleum and coke increased in price, as did also some kinds of coal. Other kinds of coal decreased slightly in price.

In the metals and implements group the increase in the average price for 1907 over 1906 was 6.1 per cent. Of a total of 38 articles in the group there was an increase in the price of 25 articles, including barb wire, copper, iron, steel billets, nails, tin plate, etc. Six articles, including steel rails, did not change in price and in 7 articles there was a decrease.

Twenty-one of the 27 articles included under lumber and building materials increased in 1907 as compared with 1906. Nearly all kinds of timber products showed a marked increase. There was a decrease in the prices of brick, window glass, turpentine, and spruce. In the group as a whole there was an increase in price of 4.9 per cent.

The increase in the average price of drugs and chemicals in 1907 over 1906 was 8.3 per cent, the articles showing the greatest increase being glycerin and opium. Wood alcohol showed a marked decrease in price.

House furnishing goods as a whole increased 6.8 per cent in price. The increase was in furniture, wooden ware, and cutlery. Earthenware and glassware did not change in price. No article included in this group showed a decrease as compared with 1906.

In the miscellaneous group there was a marked increase in the prices of news paper, cotton-seed oil, malt, and starch. There was no change in the price of smoking tobacco, and there was a decrease in the prices of rubber and 3 other articles. Taken together, the group of miscellaneous articles increased in price 5 per cent. The per cent of increase or decrease in the average wholesale price for 1907 for each of the 258 articles as compared with the price for 1906 is shown on pages 312 to 315.

In addition to the classification into the nine groups named above, the 258 articles included in the investigation have been divided into two general groups, designated as raw commodities and manufactured commodities. Of course fixed definitions of these classes can not be made, but the commodities here designated as raw may be said to be such as are marketed in their natural state and such as have been subjected to only a preliminary manufacturing process, thus converting them into a marketable condition, but not to a suitable form for final consumption, while the commodities here designated as manufactured are such as have been subjected to more than a preliminary factory manipulation and in which the manufacturing labor cost constitutes an important element in the price. In the group designated as raw are included all farm products, beans, coffee, eggs, milk, rice, nutmegs, pepper, tea, vegetables, raw silk, wool, coal, crude petroleum, copper ingots, pig lead, pig iron, bar silver, spelter, pig tin, brimstone, jute, and rubber—a total of 50 articles. All the other articles are classed as manufactured commodities.

As thus grouped it appears that the average wholesale price of raw commodities for 1907 was 5.5 per cent higher than for 1906, and that the average wholesale price of manufactured commodities for 1907 was 5.8 per cent higher than for 1906.

While the general average of wholesale prices for the year 1907 was higher than the average for 1906, the tendency upward did not continue throughout the year, as there was a heavy decline in prices in November and a still further decline in December. The following table shows the per cent that the average price for each month of the year 1907 was above or below the average price for the year, and in the last column the per cent of decrease of the average December price below the average price for each preceding month:

COMPARISON OF AVERAGE PRICE FOR EACH MONTH OF 1907 WITH THE AVERAGE PRICE FOR THE YEAR, AND OF AVERAGE PRICE FOR DECEMBER, 1907, WITH THE AVERAGE PRICE FOR EACH PRECEDING MONTH OF THE YEAR.

Month.	Per cent of price for month -		Per cent of decrease in December below each preceding month.
	Above average price for year.	Below average price for year.	
January		1.2	1.2
February		.4	2.0
March		.1	2.3
April		.3	2.1
May	0.1		2.5
June	.5		2.8
July	.6		3.0
August	.5		2.9
September	1.0		3.4
October	1.2		3.5
November		.5	1.9
December		2.4	

The average for wholesale prices for January, 1907, was 1.2 per cent below the average for the year. In February and March there was an advance, followed by a decline in April. There was a further advance in May, June, and July, followed by a slight decline in August. There was another advance in September, and in October the wholesale prices reached the highest point attained during the year, when they were 1.2 per cent above the average price for the year. In November there was a decline in prices to a point 0.5 per cent below the average for the year. In December prices reached their lowest point in the year, being 2.4 per cent below the average for the year.

From the figures given in the last column of the table it is seen that the average of wholesale prices in December, 1907, was 1.2 per cent below the average in January and 3.5 per cent below the average in October, the month of highest prices during the year.

The change that took place in wholesale prices month by month during 1907 in each of the nine groups already referred to will be seen in the following table:

COMPARISON OF AVERAGE PRICE FOR EACH MONTH OF 1907 WITH AVERAGE PRICE FOR THE YEAR, AND OF AVERAGE PRICE FOR DECEMBER, 1907, WITH AVERAGE PRICE FOR EACH PRECEDING MONTH OF THE YEAR, BY GROUPS OF COMMODITIES.

Month.	Farm products.			Food, etc.			Cloths and clothing.		
	Per cent of price for month—		Per cent of increase (+) or decrease (−) in December as compared with each preceding month	Per cent of price for month—		Per cent of increase (+) or decrease (−) in December as compared with each preceding month	Per cent of price for month—		Per cent of increase (+) or decrease (−) in December as compared with each preceding month.
	Above average price for year.	Below average price for year.		Above average price for year.	Below average price for year.		Above average price for year	Below average price for year.	
January	....	5.9	−0.5	......	0.7	+3.2	......	2.8	+3.2
February	......	1.8	4.7	0.3	......	+2.2	......	2.2	+2.6
March	......	1.2	−5.2	......	.9	+3.5	......	1.7	+2.0
April	......	.4	−6.0	......	3.3	+6.1	......	1.1	+1.4
May	2.0	....	−8.3	......	3.4	+6.2	......	.6	+1.0
June	5.2	....	−11.0	......	2.2	+4.9	0.2	....	+ .2
July	2.5	....	−8.7	....	2.5	+5.1	1.0	....	− .7
August	2.8	....	−9.0	....	2.1	+4.8	1.3	....	− .9
September	6.1	....	−11.8	......	.3	+2.9	2.0	....	−1.6
October	5.3	....	−11.1	4.8	....	−2.2	1.7	....	−1.3
November	......	6.0	− .5	4.2	....	−1.6	1.2	....	− .9
December	....	6.4	....	2.5	....	....	.3	....	....

COMPARISON OF AVERAGE PRICE FOR EACH MONTH OF 1907 WITH AVERAGE PRICE FOR THE YEAR, AND OF AVERAGE PRICE FOR DECEMBER, 1907, WITH AVERAGE PRICE FOR EACH PRECEDING MONTH OF THE YEAR, BY GROUPS OF COMMODITIES—Concluded.

Month.	Fuel and lighting.			Metals and implements.			Lumber and building materials.		
	Per cent of price for month—		Per cent of increase (+) or decrease (-) in December as compared with each preceding month	Per cent of price for month -		Per cent of increase (+) or decrease (-) in December as compared with each preceding month.	Per cent of price for month—		Per cent of increase (+) or decrease (-) in December as compared with each preceding month.
	Above average price for year.	Below average price for year.		Above average price for year.	Below average price for year.		Above average price for year	Below average price for year.	
January	0.6		1.6	3.1		-12.2		0.7	-6.0
February	1.2		-2.2	4.0		-12.9	0.3		-6.9
March	.4		-1.4	3.8		12.8	1.5		-8.0
April		2.1	+1.1	3.6		12.7	2.5		-8.8
May		1.8	+.8	3.8		-12.8	2.4		-8.8
June		2.8	+1.8	3.3		12.4	2.0		-8.4
July		1.6	+.5	2.4		11.6	1.6		-8.0
August		.7	-.4		0.5	9.0	1.4		-7.9
September	.1		1.2		1.8	-7.8	.2		6.8
October	3.6		-4.5		5.6	-4.1		1.4	5.3
November	3.6		-4.5		7.0	-2.6		3.2	-3.5
December		1.0			9.5			6.6	

Month	Drugs and chemicals			House furnishing goods.			Miscellaneous			All commodities		
	Per cent of price for month -		Per cent of increase (+) or decrease (—) in December as compared with each preceding month	Per cent of price for month		Per cent of increase (+) or decrease (—) in December as compared with each preceding month	Per cent of price for month -		Per cent of increase (+) or decrease (—) in December as compared with each preceding month	Per cent of price for month—		Per cent of increase (+) or decrease (—) in December as compared with each preceding month.
	Above average price for year.	Below average price for year.		Above average price for year	Below average price for year.		Above average price for year	Below average price for year		Above average price for year	Below average price for year	
January		6.8	+10.1		3.0	+4.5		0.9	-4.3		1.2	-1.2
February		5.6	+8.6		3.0	+4.5		2.6	-2.6		.4	-2.0
March		5.7	+8.7		1.1	+2.6	1.1		-6.1		.1	-2.3
April		4.2	+7.0		.8	+2.3	1.4		-6.4		.3	-2.1
May		4.4	+7.3		.8	+2.3	1.9		-6.9	0.1		-2.5
June		4.7	+7.7	(a)	(a)	+1.4	1.3		-6.4	.5		-2.8
July		1.4	+4.0	0.9		+.5	2.5		-7.4	.6		-3.0
August	8.7		-5.6	1.7		-.2	.3		-5.4	.5		-2.9
September	8.7		-5.6	1.7		-.2	.6		-5.6	1.0		-3.4
October	6.5		-3.7	1.7		-.2	1.9		-6.9	1.2		-3.5
November	5.7		-2.9	1.4		(b)		2.2	-3.0		.5	-1.9
December	2.6			1.4				5.1			2.4	

a Same as average price for year.

b Same as average price for December.

In January, 1907, the wholesale price of farm products as a group was 5.9 per cent below the average price for the year. In each month until June there was an advance in price. In July and August the price was a little lower than in June. The highest point reached during the year was in September, when the price was 6.1 per cent above the average for the year. There was a slight decline in October and a very heavy decline in November, in which month the price was 6 per cent below the average price for the year. In December the price had fallen slightly lower, the price being 6.4 per cent below the average price for the year. The price in December was 0.5 per cent lower than in January and 11.8 per cent lower than in September, the month of highest prices in this group. The movement in prices during the year for each of the articles that enter into this and the other groups will be found in Table II, pages 396 to 414, or, if desired, the full details of the prices throughout the year may be found in Table I, pages 347 to 395.

Food commodities as a group were at their lowest price in May and at their highest in October, when they were 4.8 per cent above the average price for the year. The increase in October as compared with May was 8.5 per cent. Food commodities declined in price in November and made a still further decline in December. Prices in December were 3.2 per cent higher than in January and 6.2 per cent higher than in May.

The price of cloths and clothing was below the average price for the year during the first five months of the year. From January to September there was an advance in price each month. In the last three months of the year there was a decline in price each month. The price in December was 3.2 per cent higher than in January, but 1.6 per cent lower than in September.

The lowest price reached in the group of fuel and lighting was in June, when the price was 2.8 per cent below the average price for the year. The highest price reached was in October and November, in each of which months the price was 3.6 per cent above the average price for the year. In December there was a sharp decline, the price in that month being 1 per cent below the average price for the year. The price in December was 1.6 per cent lower than in January, 1.8 per cent higher than in June, and 4.5 per cent lower than in October and November.

The price of metals and implements was above the average price for the year during the first seven months of the year. Beginning with June, there was a decline each month until December, when the price was 9.5 per cent below the average price for the year. The price in December was 12.9 per cent lower than in February, the month of highest prices in this group during the year.

Lumber and building materials were 0.7 per cent below the average price for the year in the month of January. The price increased each month up to April, in which month the price was 2.5 per cent above the average price for the year. In each succeeding month there was a decline in price from the month immediately preceding, until in December the price was 6.6 per cent below the average price for the year. In December the price was 8.8 per cent lower than in April, the month of highest price in this group.

Drugs and chemicals were below the average price for the year during the first seven months in the year and above the average price for the year during the remaining five months. The lowest point in the year was in January, when the price was 6.8 per cent below the average price for the year, and the highest in August and September, when the price was 8.7 per cent above the average price for the year. In December the price was 10.1 per cent higher than in January and 5.6 per cent lower than in August and September.

House furnishing goods were at their lowest price in January and February and at their highest price in August, September, and October. In these months the price was 1.7 per cent above the average price for the year. The price in November and December was slightly lower than in the three preceding months. The price in December was 4.5 per cent higher than the price in January and February.

Miscellaneous articles in January were 0.9 per cent below the average price for the year and 2.6 per cent below the average price for the year in February. The month of highest price in this group was in July, when the average price was 2.5 per cent above the average price for the year. A marked decline in price occurred, both in November and in December, until in the latter month the average price was 5.1 per cent below the average price for the year.

While the year 1907 was as a whole one of high prices, the heavy decline in the latter part of the year was quite general. Of the 258 articles included in this report, 132 had in December declined from the highest point reached during the year and 46 showed a lower average price for December than for any other month of the year. A few of the articles for which the December prices were much lower than in preceding months are here noted. Heavy hogs declined from an average of $7.0313 per hundred in February to $4.65 in December, being a decline of 33.9 per cent. Sheep declined 39.1 per cent from April to December; coffee declined 18.9 per cent from March to December; smoked hams declined 22.2 per cent from May to December; dressed mutton declined 24.4 per cent from May to December; print cloths declined 16.1 per cent from October to December; raw Japan silk declined 24.2 per cent from May to December; coke declined 44.1 per cent from February to December; ingot copper declined 45.1 per cent from May to December; pig lead declined 33.4 per cent from March to December; No. 1 foundry iron declined 31.1 per cent from January to December; spelter declined 35.1 per cent from February to December; red cedar shingles declined 35.5 per cent from August to December; brick declined 26.7 per cent from

June to December; tar declined 42.9 per cent from April to December; quinine declined 27.3 per cent from February to December; raw jute declined 45.9 per cent from January to December; rubber declined 34.2 per cent from March to December. The price of 72 articles remained the same throughout the year 1907, and for only 8 articles was the average price for December higher than for any other month in the year. The average monthly prices for the several articles are given in Table II, pages 396 to 414.

The following table has been prepared, showing for both raw and manufactured commodities, according to the classification already explained, the per cent that prices in each month in 1907 were above or below the average prices of the year and the per cent of decrease in December below each preceding month of the year:

COMPARISON OF AVERAGE PRICES OF RAW AND MANUFACTURED COMMODITIES FOR EACH MONTH OF 1907, WITH THE AVERAGE PRICES FOR THE YEAR, AND OF AVERAGE PRICES FOR DECEMBER, 1907, WITH THE AVERAGE PRICES FOR EACH PRECEDING MONTH OF THE YEAR.

Month.	Raw commodities			Manufactured commodities			All commodities.		
	Per cent of price for month		Per cent of decrease in December below each preceding month	Per cent of price for month—		Per cent of decrease in December below each preceding month	Per cent of price for month—		Per cent of decrease in December below each preceding month.
	Above average price for year.	Below average price for year.		Above average price for year	Below average price for year.		Above average price for year.	Below average price for year.	
January...	1.0		7.8		1.8	[a]0.6		1.2	1.2
February....	2.0		8.7		1.0	.2		.4	2.0
March.	2.1		8.8		6	6		.1	2.3
April..	.4		7.2		.5	8		.3	2.1
May	1.9		8.7		.5	.8	0.1		2.5
June...	2.6		9.3		1	1.2	5		2.8
July.	.6		7.5	0.6		1.9	.6		3.0
August..		0.8	6.1	.9		2.1	.5		2.9
September...		.4	6.5	1.3		2.5	1.0		3.4
October...	.7		7.5	1.2		2.5	1.2		3.5
November.		4.0	3.0	.4		1.6		.5	1.9
December....		6.9			1.2			2.4	

[a] Increase.

From this table it is seen that there was a greater fluctuation in the prices of raw commodities during the year than in the prices of manufactured commodities. In June, the price of raw commodities was 2.6 per cent above the average price for the year, while in December the price was 6.9 per cent below the average price for the year. In manufactured commodities, the lowest prices were in January, when the average was 1.8 per cent below the average price for the year, while in September the average was 1.3 per cent higher than the average price for the year. Thus, December marked the lowest prices in raw commodities and January marked the lowest prices in manufactured commodities, while June marked the highest prices in raw commodities and September the highest prices in manufactured commodities. Prices of raw commodities in December averaged 7.8

per cent lower than in January and 9.3 per cent lower than in June. The December prices of manufactured commodities averaged 0.6 per cent higher than those for January and 2.5 per cent lower than those of September.

Thus far attention has been directed to the changes that took place in wholesale prices in the year 1907 as compared with 1906 and the movement of wholesale prices month by month during the year 1907. Attention is now directed to the course of wholesale prices from year to year since 1890. The following table shows, by relative prices, the changes in the average wholesale prices of the articles for which prices were secured from 1890 to 1907, inclusive. The relative price used in this table is simply a percentage. The base on which the relative price is computed is not the price in any one year, but the average price for the ten years from 1890 to 1899, inclusive. The reason for adopting this base is fully explained on page 326. Relative prices, such as are here shown, are also sometimes spoken of as relative numbers or as index numbers. In computing the relative price for all commodities for each year the relative prices for the several commodities were added and the sum divided by the number of commodities.

To assist in comparing wholesale prices in 1907 with the prices each year back to 1890, another column is given in the table showing the per cent of the increase in prices for 1907 over the prices for each of the preceding years.

RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND PER CENT OF INCREASE IN PRICES FOR 1907 OVER PRICES FOR EACH PRECEDING YEAR.

Year.	Relative price of all commodities (a)	Per cent of increase in 1907 over each preceding year	Year.	Relative price of all commodities. (a)	Per cent of increase in 1907 over each preceding year.
1890	112.9	14.7	1899	101.7	27.3
1891	111.7	15.9	1900	110.5	17.2
1892	106.1	22.1	1901	108.5	19.4
1893	105.6	22.6	1902	112.9	14.7
1894	96.1	34.8	1903	113.6	14.0
1895	93.6	38.4	1904	113.0	14.6
1896	90.4	43.3	1905	115.9	11.7
1897	89.7	44.4	1906	[b] 122.5	5.7
1898	93.4	38.7	1907	129.5	....

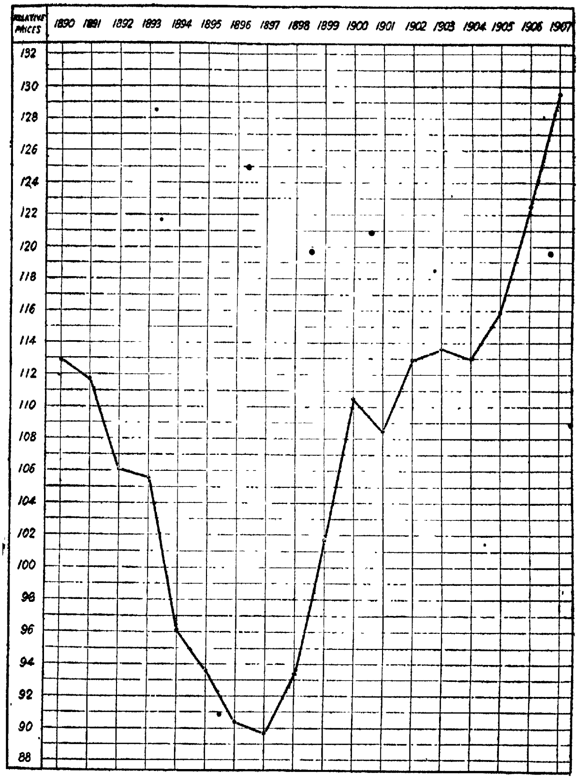
[a] Average price for 1890-1899=100.0.

[b] These figures are correct, those given for 1906 in Bulletin No. 69 were slightly in error.

The relative wholesale prices during the years from 1890 to 1907, set forth in tabular form in the preceding table, are shown also in the graphic table which follows:

RELATIVE PRICES OF ALL COMMODITIES, 1890 TO 1907.

[Average price for 1890 to 1899=100.]



The table shows that the average of wholesale prices of all commodities for 1890 was 112.9 per cent of the average of wholesale prices for the years from 1890 to 1899; in other words, that the average of wholesale prices in 1890 was 12.9 per cent higher than the average for the 10-year period named.

In 1891 relative wholesale prices declined to 111.7; that is, to a point where the average wholesale price for the year was 11.7 per cent above the average price for the 10 years from 1890 to 1899.

In 1892 relative wholesale prices dropped to 106.1 and in 1893 to 105.6. In the next year, 1894, wholesale prices fell to 96.1, a point 3.9 below the average price for the 10-year base period. In each of the three succeeding years wholesale prices declined until in 1897 they reached 89.7; that is, 10.3 per cent below the average price for the 10-year period. In each of the 3 years next succeeding, wholesale prices advanced, in 1900 reaching 110.5. In 1901 wholesale prices dropped back to 108.5. The next year, however, marked an increase, prices in 1902 being on an average a restoration of the prices in 1890, namely, 112.9. In 1903 prices advanced to 113.6. The next year, 1904, showed a slight decline, nearly back to the prices of 1890 and 1902. In 1905 prices advanced to 115.9; in 1906 prices advanced again, reaching 122.5; and finally in 1907 the general average of wholesale prices reached 129.5; that is, 29.5 per cent above the average price for the 10 years from 1890 to 1899 and a higher level than in any other year of the 18 years covered by the investigation.

The last column of the table (page 292) shows that the price in 1907 was 5.7 per cent above the price in 1906, 14.7 per cent above the price in 1890, and 44.4 per cent above the price in 1897, the year of lowest average prices within the last 18 years.

The relative prices appearing in this table are based on 251 articles in 1890 and 1891, on 253 articles in 1892, on 255 articles in 1893, on 256 articles in 1894, on 258 articles in 1906 and 1907, on 259 articles in 1895, 1904, and 1905, on 260 articles in 1896 and from 1899 to 1903, and on 261 articles in 1897 and 1898.

Having shown the movement in wholesale prices for the period from 1890 to 1907 in all commodities taken as a whole, a table is now given showing the movement in each of the 9 groups previously referred to. This table gives for each group the relative prices and the per cent of increase or, in a few instances, decrease of prices for 1907, as compared with the prices for each preceding year.

RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND PER CENT OF INCREASE IN PRICES FOR 1907 OVER PRICES FOR EACH PRECEDING YEAR, BY GROUPS OF COMMODITIES

Year.	Farm products.		Food, etc.		Cloths and clothing.		Fuel and lighting.		Metals and implements.	
	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.
1890.......	110.0	24.6	112.4	4.8	113.5	11.6	104.7	28.9	119.2	20.3
1891.......	121.5	12.8	115.7	1.8	111.3	13.8	102.7	31.5	111.7	28.4
1892.......	111.7	22.7	103.6	13.7	109.0	16.2	101.1	33.5	106.0	35.3
1893.......	107.9	27.1	110.2	6.9	107.2	18.2	100.0	35.0	100.7	42.4
1894.......	95.9	43.0	99.8	18.0	96.1	31.8	92.4	46.1	90.7	58.1
1895.......	93.3	46.9	94.6	24.5	92.7	36.7	98.1	37.6	92.0	55.9
1896.......	78.3	75.1	83.8	40.6	91.3	38.8	104.3	29.4	93.7	53.0
1897.......	85.2	60.9	87.7	34.3	91.1	39.1	96.4	40.0	86.6	65.6
1898.......	96.1	42.7	94.4	24.8	93.4	35.7	95.4	41.5	86.4	66.0
1899.......	100.0	37.1	98.3	19.8	96.7	31.0	105.0	28.6	114.7	25.0
1900.......	109.5	25.2	104.2	13.1	106.8	18.6	120.9	11.7	120.5	19.0
1901.......	116.9	17.3	105.9	11.2	101.0	25.4	119.5	13.0	111.9	28.2
1902.......	130.5	5.1	111.3	5.8	102.0	24.2	134.3	.5	117.2	22.4
1903.......	118.8	15.4	107.1	10.0	106.6	18.[illegible]	149.3	(b)9.6	117.6	21.9
1904.......	126.2	8.6	107.2	9.9	109.8	15.4	132.6	1.8	109.6	30.8
1905.......	124.2	10.4	108.7	8.4	112.0	13.1	128.8	4.8	122.5	17.1
1906.......	123.6	10.9	112.6	4.6	120.0	5.6	(c)131.9	2.4	135.2	6.1
1907.......	137.1	....	117.8	....	126.7	....	135.0	....	143.4	....

Year.	Lumber and building materials.		Drugs and chemicals.		House furnishing goods.		Miscellaneous.		All commodities.	
	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.
1890.......	111.8	31.4	110.2	(b)0.5	111.1	6.7	110.3	15.2	112.9	14.7
1891.......	108.4	35.5	103.6	5.8	110.2	7.5	109.4	16.2	111.7	15.9
1892.......	102.8	42.9	102.9	6.5	106.5	11.3	106.2	19.7	106.1	22.1
1893.......	101.9	44.2	100.5	9.1	104.9	13.0	105.9	20.0	105.6	22.6
1894.......	96.3	52.5	89.8	22.0	100.1	18.4	99.8	27.4	96.1	34.8
1895.......	94.1	56.1	87.9	24.7	96.5	22.8	94.5	34.5	93.6	38.4
1896.......	93.4	57.3	92.6	18.4	94.0	26.1	91.4	39.1	90.4	43.3
1897.......	90.4	62.5	94.4	16.1	89.8	32.0	92.1	38.0	89.7	44.4
1898.......	95.8	53.3	106.6	2.8	92.0	28.8	92.4	37.6	93.4	38.7
1899.......	105.8	38.8	111.3	(b)1.5	95.1	24.6	97.7	30.1	101.7	27.3
1900.......	115.7	27.0	115.7	(b)5.3	106.1	11.7	109.8	15.8	110.5	17.2
1901.......	116.7	25.9	115.2	(b)4.9	110.9	6.9	107.4	18.3	108.5	19.4
1902.......	118.8	23.7	114.2	(b)4.0	112.2	5.6	114.1	11.4	112.9	14.7
1903.......	121.4	21.0	112.6	(b)2.7	113.0	4.9	113.6	11.9	113.6	14.0
1904.......	122.7	19.7	110.0	(b).4	111.7	6.1	111.7	13.8	113.0	14.6
1905.......	127.7	15.0	109.1	.5	109.1	8.6	112.8	12.7	115.9	11.7
1906.......	140.1	4.9	101.2	8.3	111.0	6.8	121.1	5.0	(c)122.5	5.7
1907.......	146.9	....	109.6	....	118.5	....	127.1	....	129.5	....

(a) Average price for 1890-1899=100.0.
(b) Decrease.
(c) These figures are correct; those given for 1906 in Bulletin No. 69 were slightly in error.

In this table the average relative prices of farm products are based on 16 articles; of food, etc., on 53 articles from 1890 to 1892 and from 1904 to 1907, and 54 from 1893 to 1903; of cloths and clothing, on 70 articles in 1890 and 1891, 72 in 1892, 73 in 1893 and 1894, 75 in 1895, 1896, 1906, and 1907, and 76 from 1897 to 1905; of fuel and lighting, on 13 articles; of metals and implements, on 37 articles from 1890 to 1893, 38 in 1894 and 1895 and from 1899 to 1907, and 39 from 1896 to 1898; of lumber and building materials, on 26 articles from 1890 to 1894 and 27 from 1895 to 1907; of drugs and chemicals, on 9 articles; of house furnishing goods, on 14 articles, and of miscellaneous, on 13 articles.

A study of the table shows that the group of farm products reached the lowest average in 1896 and the highest in 1907; that of food, etc., the lowest in 1896 and the highest in 1907; that of cloths and clothing, the lowest in 1897 and the highest in 1907; that of fuel and lighting, the lowest in 1894 and the highest in 1903; that of metals and implements, the lowest in 1898 and the highest in 1907; that of lumber and building materials, the lowest in 1897 and the highest in 1907; that of drugs and chemicals, the lowest in 1895 and the highest in 1900; that of house furnishing goods, the lowest in 1897 and the highest in 1907, while in the miscellaneous group the lowest average was reached in 1896 and the highest in 1907. The average for all commodities combined, as before stated, was lowest in 1897 and highest in 1907. Of the nine groups, it is seen that one reached its lowest point in 1894, one in 1895, three in 1896, three in 1897, and one in 1898. The highest point was reached by one group in 1900, by one in 1903, and by seven in 1907.

In order to follow the movement in the two great classes—raw and manufactured commodities—the following table has been prepared. The articles included under each of the two groups are indicated on page 286.

RELATIVE PRICES OF RAW AND OF MANUFACTURED COMMODITIES, 1890 TO 1907, AND PER CENT OF INCREASE IN PRICES FOR 1907 OVER PRICES FOR EACH PRECEDING YEAR.

Year.	Raw commodities.		Manufactured commodities.		All commodities.	
	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.	Relative price. (a)	Per cent of increase in 1907 over each preceding year.
1890	115.0	16.0	112.3	14.5	112.9	14.7
1891	116.3	14.7	110.6	16.3	111.7	15.9
1892	107.9	23.6	105.6	21.8	106.1	22.1
1893	104.4	27.8	105.9	21.4	105.6	22.6
1894	93.2	43.1	96.8	32.9	96.1	34.8
1895	91.7	45.5	94.0	36.8	93.6	38.4
1896	84.0	58.8	91.9	39.9	90.4	43.3
1897	87.6	52.3	90.1	42.7	89.7	44.4
1898	94.0	41.9	93.3	37.8	93.4	38.7
1899	105.9	26.0	100.7	27.7	101.7	27.3
1900	111.9	19.2	110.2	16.7	110.5	17.2
1901	111.4	19.7	107.8	19.3	108.5	19.4
1902	122.4	9.0	110.6	16.3	112.9	14.7
1903	122.7	8.7	111.5	15.3	113.6	14.0
1904	119.7	11.4	111.3	15.5	113.0	14.6
1905	121.2	10.1	114.6	12.2	115.9	11.7
1906	[b] 126.5	5.5	121.6	5.8	[b] 122.5	5.7
1907	133.4	....	128.6	....	129.5	....

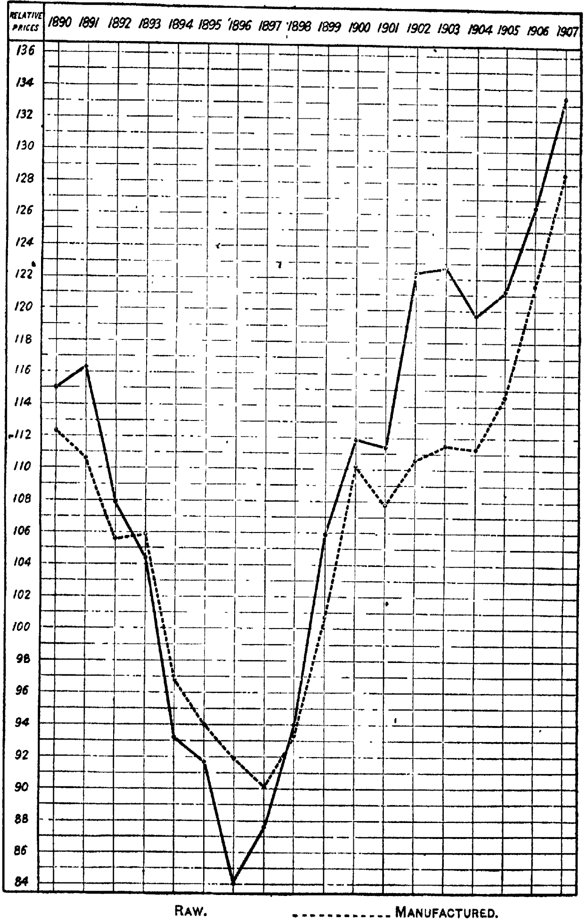
[a] Average price for 1890-1899 = 100.0.
[b] These figures are correct, those given for 1906 in Bulletin No. 69 were slightly in error.

In 1890, when prices in general were high, the relative prices of raw commodities were higher than those of manufactured commodities and remained so until 1893, when prices of raw commodities declined and those of manufactured commodities were slightly above the prices of 1892. From 1894 to 1896 there was a marked decline in both groups, the raw commodities being lower than the manufactured in each of these years. In 1897 raw commodities advanced and manufactured declined. From 1898 to 1900 there was a decided advance in both groups each year, raw commodities advancing to a higher point than manufactured. In 1901 there was a very slight decline in raw and a more marked decline in manufactured commodities. In 1902 both raw and manufactured commodities made a decided advance, raw commodities much the greater, and in 1903 both slightly advanced. In 1904 both raw and manufactured commodities declined slightly, but in 1905 both raw and manufactured commodities advanced. In 1906 both raw and manufactured commodities made a sharp advance, and another sharp advance, equally great, was made in both groups in 1907. In 1907 both raw and manufactured commodities reached the highest point during the 18 years considered.

For the 18 years included in this table, with the single exception of 1893, it will be seen that during the years of high prices raw commodities were higher than manufactured, and during the years of low prices, with the exception of 1898, raw commodities were lower than manufactured. This is clearly shown in the graphic table which follows:

RELATIVE PRICES OF RAW AND MANUFACTURED COMMODITIES, 1890 TO 1907.

[Average price for 1890 to 1899=100.]



To give an opportunity to study the movement in prices in each of the 9 groups before named, month by month for a few years back, a table is now given showing the relative prices in each group and for all commodities for each month from January, 1902, to December, 1907, inclusive:

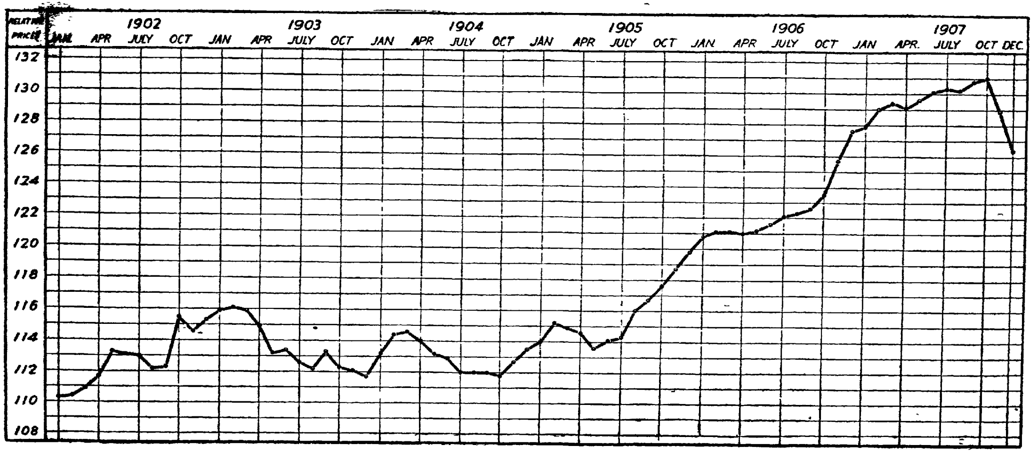
RELATIVE PRICES OF COMMODITIES FOR EACH MONTH, 1902 TO 1907, BY GROUPS.

[Average price for 1890-1899=100.0.]

Date.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous.	All commodities.
1902.										
January	126.7	111.4	101.5	119.4	111.4	111.4	119.1	111.5	115.7	110.3
February	126.8	111.8	101.5	118.6	112.2	112.8	117.2	111.5	112.3	110.4
March	129.0	111.1	101.9	118.9	114.1	113.2	117.4	111.5	114.0	110.9
April	131.4	111.4	101.5	118.1	115.1	116.3	117.3	111.5	115.2	111.7
May	137.7	112.6	101.5	123.3	118.1	120.5	114.3	112.5	115.9	113.3
June	137.6	109.3	101.6	125.9	119.9	121.5	114.3	112.5	116.6	113.1
July	141.1	110.3	101.8	121.0	119.9	120.1	112.6	112.5	116.7	113.0
August	131.0	108.5	101.5	120.8	120.6	121.6	111.4	112.5	114.2	112.2
September	129.7	107.9	102.0	127.2	120.4	121.0	110.2	112.5	113.6	112.3
October	126.3	112.2	102.7	175.9	119.4	121.8	112.3	112.5	111.7	115.5
November	123.5	112.6	102.8	158.0	118.7	122.6	113.5	112.5	110.9	114.6
December	122.3	114.1	103.0	171.2	117.3	122.7	111.5	112.5	112.9	115.3
Average, 1902.	130.5	111.3	102.0	134.3	117.2	118.8	114.2	112.2	114.1	112.9
1903.										
January	123.3	112.3	104.2	178.6	119.4	120.7	111.8	112.2	113.3	115.9
February	124.8	111.4	104.5	178.6	119.6	122.8	111.4	112.2	113.5	116.1
March	127.0	112.3	104.9	154.8	121.6	123.3	113.7	113.1	114.9	115.9
April	125.0	110.0	105.0	149.0	123.1	120.9	111.4	113.1	114.2	114.9
May	122.1	104.8	105.4	145.0	121.9	118.7	112.8	113.1	115.1	113.2
June	121.1	105.6	106.3	143.1	119.7	120.6	113.7	113.1	114.3	113.4
July	115.8	103.8	107.5	141.1	118.1	120.1	113.1	113.1	114.3	112.6
August	111.8	103.1	107.8	140.3	117.0	119.5	113.9	113.1	114.4	112.2
September	117.2	107.1	108.2	140.4	115.8	121.5	112.8	112.7	114.4	113.3
October	112.5	104.4	108.0	141.2	114.3	121.3	112.6	113.5	114.5	112.3
November	109.9	105.6	108.1	140.1	111.8	124.3	112.5	113.5	110.4	112.1
December	112.2	105.5	108.6	139.8	109.0	123.1	111.4	113.5	110.1	111.7
Average, 1903.	118.8	107.1	106.6	149.3	117.6	121.4	112.6	113.0	113.6	113.6
1904.										
January	120.8	106.3	110.4	143.6	108.9	123.6	111.7	111.9	110.2	113.2
February	127.2	108.3	112.1	141.9	109.0	124.4	110.4	111.5	111.2	114.4
March	130.3	108.7	111.9	138.7	109.6	123.5	110.6	111.5	112.9	114.6
April	129.2	107.4	111.7	130.6	111.0	123.6	111.8	111.5	112.6	114.0
May	127.6	105.2	110.9	129.1	110.6	123.9	112.3	111.8	112.7	113.2
June	126.8	105.1	110.5	129.4	109.3	125.5	110.6	111.8	111.6	112.9
July	125.2	105.2	108.8	127.8	108.6	124.4	109.9	111.8	112.9	112.0
August	125.3	106.3	108.6	128.2	108.3	123.6	109.6	111.8	111.6	112.0
September	126.0	108.5	108.4	128.8	107.6	120.4	108.5	111.8	111.2	112.0
October	125.4	107.8	108.4	129.1	107.7	119.5	108.2	111.8	111.6	111.8
November	126.4	110.2	108.3	130.8	110.7	119.4	107.7	111.8	109.7	112.7
December	122.2	111.4	108.6	133.9	113.4	120.1	109.1	111.8	111.5	113.5
Average, 1904.	126.2	107.2	109.8	132.6	109.6	122.7	110.0	111.7	111.7	113.0
1905.										
January	124.1	112.2	109.6	130.8	115.2	120.1	108.9	109.1	111.2	114.0
February	125.9	113.6	108.5	132.8	119.7	121.9	109.4	109.1	113.8	115.2
March	127.1	110.3	108.7	130.5	122.6	120.7	110.0	109.1	114.6	114.9
April	127.0	109.0	108.8	125.8	122.5	122.8	110.5	109.1	113.9	114.6
May	125.2	104.6	109.0	124.0	122.3	124.5	109.0	109.1	112.1	113.6
June	126.2	102.7	110.1	124.4	121.2	130.7	108.8	109.1	112.9	114.1
July	128.9	103.2	111.5	124.3	120.8	128.0	106.4	109.1	110.6	114.3
August	125.3	105.9	113.8	125.3	122.3	131.6	108.1	109.1	111.6	116.0
September	120.4	108.3	114.5	126.5	123.2	131.9	110.0	109.1	111.8	116.7
October	120.1	108.8	115.2	132.2	124.2	133.4	110.2	109.1	112.5	117.6
November	119.7	110.2	116.1	134.5	126.3	134.2	109.5	109.1	113.3	118.7
December	121.8	112.1	117.1	134.7	129.3	132.1	108.8	109.1	115.1	119.8
Average, 1905.	124.2	108.7	112.0	128.8	122.5	127.7	109.1	109.1	112.8	115.9

RELATIVE PRICES OF ALL COMMODITIES, BY MONTHS, 1902 TO 1907.

[Average price for 1890 to 1899=100.]



RELATIVE PRICES OF COMMODITIES FOR EACH MONTH, 1902 TO 1907, BY GROUPS—Concluded.

[Average price for 1890-1899=100.0.]

Date.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals	House furnishing goods.	Miscellaneous.	All commodities.
1906.										
January	119.5	112.3	119.4	a 134.0	131.0	135.0	102.9	108.8	118.6	a 120.8
February	118.7	112.2	119.5	a 131.3	131.6	138.4	101.5	108.8	118.9	a 121.1
March	119.4	111.7	119.6	a 130.9	131.5	139.6	101.2	108.8	118.1	a 121.1
April	122.5	111.0	119.3	a 131.7	131.3	139.2	101.0	108.8	117.6	a 121.0
May	124.2	109.8	119.5	a 129.9	132.3	140.4	100.2	108.8	121.3	a 121.2
June	126.2	111.1	119.4	a 128.6	133.2	139.8	100.3	108.8	122.2	a 121.6
July	124.0	112.3	119.3	a 129.7	133.1	141.5	100.3	112.1	122.6	a 122.1
August	122.8	113.2	119.3	a 131.3	133.2	139.9	101.6	112.1	123.0	a 122.3
September	123.8	112.4	119.7	a 131.9	135.4	141.0	100.9	112.1	121.4	a 122.6
October	125.2	112.7	120.3	a 132.2	139.3	141.1	100.7	112.7	120.3	a 123.5
November	126.9	115.8	121.6	a 134.5	143.6	141.6	100.7	115.0	123.4	a 125.7
December	130.0	118.2	122.2	a 136.5	146.9	143.3	102.9	115.0	125.8	a 127.6
Average, 1906.	123.6	112.6	120.0	a 131.9	135.2	140.1	101.2	111.0	121.1	a 122.5
1907.										
January	129.0	117.0	123.2	135.8	147.9	145.9	102.1	115.0	126.0	127.9
February	134.6	118.2	123.9	136.6	149.1	147.3	103.5	115.0	123.8	129.0
March	135.4	116.7	124.6	135.5	148.8	149.1	103.4	117.2	128.5	129.4
April	136.5	113.9	125.3	132.[illegible]	148.6	150.5	105.0	117.5	128.9	129.1
May	139.9	113.8	125.9	132.6	148.8	150.4	104.8	117.5	129.5	129.6
June	144.2	115.2	126.9	131.2	148.1	149.8	104.4	118.5	128.8	130.1
July	140.5	114.9	128.0	132.9	146.9	149.2	108.1	119.6	130.3	130.3
August	141.0	115.3	128.3	134.1	142.7	149.0	119.1	120.5	127.5	130.2
September	145.5	117.4	129.2	135.2	140.8	147.2	119.1	120.5	127.8	130.8
October	144.4	123.5	128.8	139.9	135.4	144.9	116.7	120.5	120.5	131.0
November	128.9	122.8	128.2	139.9	133.3	142.2	115.8	120.2	124.3	128.9
December	128.3	120.8	127.1	133.6	129.8	137.2	112.4	120.2	120.6	126.4
Average, 1907.	137.1	117.8	126.7	135.0	143.4	146.9	109.6	118.5	127.1	129.5

a These figures are correct; those given for 1906 in Bulletin No. 69 were slightly in error.

In this table the average relative prices of farm products are based on 16 articles; of food, etc., on 54 articles in 1902 and 1903 and on 53 articles from 1904 to 1907; of cloths and clothing, on 76 articles from 1902 to 1905 and on 75 articles in 1906 and 1907; of fuel and lighting, on 13 articles; of metals and implements, on 38 articles; of lumber and building materials, on 27 articles; of drugs and chemicals, on 9 articles; of house furnishing goods, on 14 articles, and of miscellaneous, on 13 articles. The average relative prices of all commodities are based on 260 articles in 1902 and 1903; on 259 articles in 1904 and 1905, and on 258 articles in 1906 and 1907.

The table shows that the group of farm products reached the lowest average in November, 1903, and the highest in September, 1907; that of food, etc., the lowest in June, 1905, and the highest in October, 1907; that of cloths and clothing, the lowest in January, February, April, May, and August, 1902, and the highest in September, 1907; that of fuel and lighting, the lowest in April, 1902, and the highest in January and February, 1903; that of metals and implements, the lowest in September, 1904, and the highest in February, [illegible] that of lumber and building materials, the lowest in January, [illegible] the highest in April, 1907; that of drugs and chemicals, the lowest in

May, 1906, and the highest in January, 1902, and in August and September, 1907; that of house furnishing goods, the lowest, January to June, 1906, and the highest in August, September, and October, 1907; while in the miscellaneous group the lowest average was reached in November, 1904, and the highest in July, 1907. It is interesting to see that during the six years the relative price of not a single group was as low as the base—that is, the average price for the 10-year period from 1890 to 1899. Farm products were from 9.9 per cent to 45.5 per cent above base (average price for the 10-year period, 1890 to 1899); food, etc., from 2.7 per cent to 23.5 per cent above base; cloths and clothing, from 1.5 per cent to 29.2 per cent above base; fuel and lighting, from 18.1 per cent to 78.6 per cent above base; metals and implements, from 7.6 per cent to 49.1 per cent above base; lumber and building materials, from 11.4 per cent to 50.5 per cent above base; drugs and chemicals, from 0.2 per cent to 19.1 per cent above base; house furnishing goods, from 8.8 per cent to 20.5 per cent above base; the miscellaneous group, from 9.7 per cent to 30.3 per cent above base; and all commodities combined, from 10.3 per cent to 31.0 per cent above base. All commodities combined reached the lowest average for these years in January, 1902, and the highest in October, 1907.

The course of prices during the months of 1902 to 1907 as represented by all commodities is clearly shown in the graphic table on page 300.

The following table shows the movement in the wholesale prices of raw commodities and of manufactured commodities month by month from January, 1902, to December, 1907. A description of the two classes may be found on pages 285 and 286.

RELATIVE PRICES OF RAW COMMODITIES, MANUFACTURED COMMODITIES, AND ALL COMMODITIES, FOR EACH MONTH, 1902 TO 1907.

[Average price for 1890-1899=100.0.]

Date.	Raw commodities.	Manufactured commodities.	All commodities.
1902.			
January	117.0	108.7	110.3
February	116.2	109.0	110.4
March	117.0	109.5	110.9
April	117.5	110.3	111.7
May	122.8	111.0	113.3
June	121.1	111.2	113.1
July	121.8	110.9	113.0
August	119.8	110.4	112.2
September	119.6	110.6	112.3
October	131.3	111.7	115.5
November	128.7	111.2	114.6
December	131.4	111.5	115.3
Average, 1902	122.4	110.6	112.9

RELATIVE PRICES OF RAW COMMODITIES, MANUFACTURED COMMODITIES, AND ALL COMMODITIES, FOR EACH MONTH, 1902 TO 1907—Concluded.

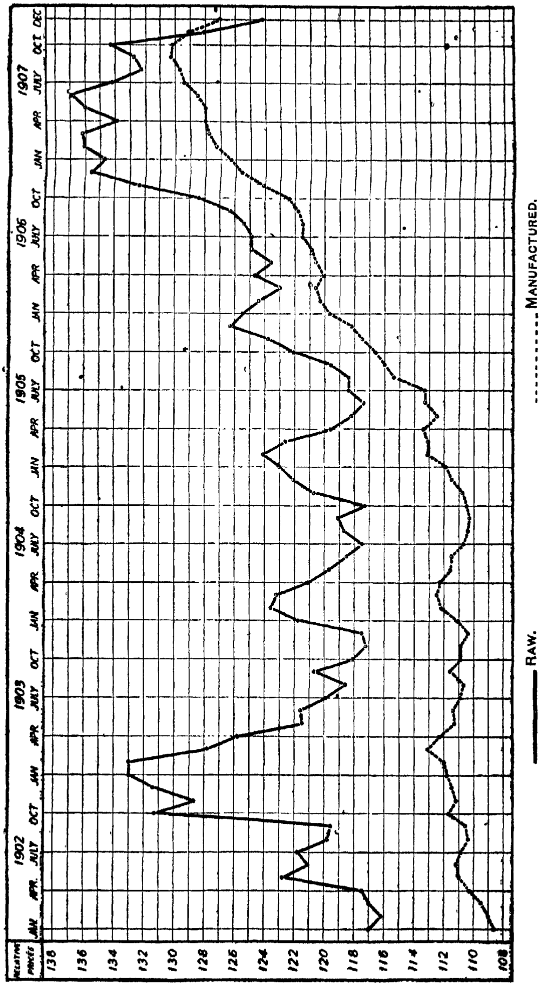
[Average price for 1890-1899=100.0.]

Date.	Raw commodities.	Manufactured commodities.	All commodities.
1903.			
January	133.0	111.8	115.9
February	133.0	112.0	116.1
March	127.8	113.1	115.9
April	125.8	112.3	114.9
May	121.5	111.3	113.2
June	121.6	111.4	113.4
July	119.9	110.9	112.6
August	118.6	110.7	112.2
September	120.7	111.6	113.3
October	118.1	110.9	112.3
November	117.2	110.9	112.1
December	117.5	110.4	111.7
Average, 1903	122.7	111.5	113.6
1904.			
January	121.8	111.1	113.2
February	123.6	112.2	114.4
March	123.2	112.5	114.6
April	121.1	112.3	114.0
May	119.7	111.6	113.2
June	118.5	111.5	112.9
July	117.5	110.7	112.0
August	118.7	110.4	112.0
September	119.1	110.3	112.0
October	117.3	110.5	111.8
November	120.7	110.8	112.7
December	122.1	111.5	113.5
Average, 1904	119.7	111.3	113.0
1905.			
January	123.0	111.9	114.0
February	124.1	113.1	115.2
March	122.6	113.1	114.9
April	119.6	113.4	114.6
May	118.2	112.5	113.6
June	117.4	113.3	114.1
July	118.4	113.3	114.3
August	118.4	115.4	116.0
September	119.6	116.0	116.7
October	122.1	116.6	117.6
November	123.8	117.5	118.7
December	126.3	118.2	119.8
Average, 1905	121.2	114.6	115.9
1906.			
January	[a] 125.5	119.7	[a] 120.8
February	[a] 124.4	120.3	[a] 121.1
March	[a] 123.0	120.6	[a] 121.1
April	[a] 124.7	120.1	[a] 121.0
May	[a] 123.6	120.6	[a] 121.2
June	[a] 124.9	120.9	[a] 121.6
July	[a] 124.9	121.5	[a] 122.1
August	[a] 125.4	121.5	[a] 122.3
September	[a] 126.3	121.8	[a] 122.6
October	[a] 128.4	122.4	[a] 123.5
November	[a] 132.4	124.1	[a] 125.7
December	[a] 135.6	125.6	[a] 127.6
Average 1906	[a] 126.5	121.6	[a] 122.5
1907.			
January	134.7	126.3	127.9
February	136.1	127.3	129.0
March	136.2	127.8	129.4
April	133.9	128.0	129.1
May	136.0	128.0	129.6
June	136.9	128.5	130.1
July	134.2	129.4	130.3
August	132.3	129.7	130.2
September	132.8	130.3	130.8
October	134.3	130.2	131.0
November	128.1	129.1	128.9
December	124.2	127.0	126.4
Average, 1907	133.4	128.6	129.5

[a] These figures are correct; those given for 1906 in Bulletin No. 69 were slightly in error.

RELATIVE PRICES OF RAW AND MANUFACTURED COMMODITIES, BY MONTHS, 1902 TO 1907.

[Average price for 1890 to 1899=100.]



The raw commodities reached the lowest average for these years in February, 1902, and the highest in June, 1907; manufactured commodities reached the lowest in January, 1902, and the highest in September, 1907. The average for raw commodities ranged from 16.2 per cent to 36.9 per cent above the base price, while the average for manufactured commodities ranged from 8.7 per cent to 30.3 per cent above the base price.

The course of prices of raw and manufactured commodities from 1902 to 1907 is shown in the graphic table on page 304.

No attempt has been made in any way to investigate the causes of the rise and fall of prices. The aim has been to give the prices as they actually prevailed in the market. The causes are too complex, the relative influence of each too uncertain, in some cases involving too many economic questions, to permit their discussion in connection with the present article. It will be sufficient to enumerate some of the influences that cause changes in prices. Such influences include variations in harvest, which not only restrict or increase the supply and consequently tend to increase or decrease the price of a commodity, but also restrict or increase, to a greater or less degree, the purchasing power of such communities as are dependent in whole or in part upon such commodity; changes in demand due to changes in fashions, seasons, etc.; legislation altering internal-revenue taxes, import duties, or bounties; inspection as to purity or adulteration; use of other articles as substitutes—as, for instance, an advance in the price of beef will cause an increased consumption of pork and mutton and, it may be added, a probable increase in the price of both pork and mutton; improvements in methods of production which will tend either to give a better article for the same price or an equal article for a lower price; cheapening of transportation or handling; speculative manipulation of the supply or of the raw product; commercial panic or depression; overproduction; unusual demand owing to steady employment of consumers; short supply owing to disputes between labor and capital in industries of limited producing capacity, as in the anthracite coal industry in 1902; organization or combination of mills or producers, thus enabling, on the one hand, a greater or less control of prices or, on the other hand, economies in production or in transportation charges through the ability to supply the article from the point of production or manufacture nearest the purchaser. So far as individual commodities are concerned, no conclusion can safely be formed as to causes without an examination of the possible influence of several—in some cases, perhaps, all—of these causes. For example, the various internal-revenue and tariff acts have, in a marked degree, no doubt affected the prices of proof spirits, of tobacco, and of sugar. But, on the other hand, they have not been alone in their influences, and it probably would not in all cases be accurate to give the change of tax or duty as representing the measure of a certain and definite influence on the prices of those commodities.

EXPLANATION OF TABLES.

The general statistical tables of this report are five in number, entitled as follows:

I.—Wholesale prices of commodities in 1907.

II.—Monthly actual and relative prices of commodities in 1907 and base prices (average for 1890-1899).

III.—Monthly relative prices of commodities in 1907.

IV.—Average yearly actual and relative prices of commodities, 1890 to 1907, and base prices (average for 1890-1899).

V.—Yearly relative prices of commodities, 1890-1907.

Table I.—Wholesale prices of commodities in 1907, pages 347 to 395.—This table shows in detail the actual prices in 1907, as obtained for the several commodities embraced by this report. There is not space within a bulletin article to republish in full the actual prices for all commodities from 1890 down to 1906. Such prices may be found, however, in the preceding March Bulletins of this Bureau, as follows:

Prices from 1890 to 1901 in Bulletin No. 39.
Prices for 1902 in Bulletin No. 45.
Prices for 1903 in Bulletin No. 51.
Prices for 1904 in Bulletin No. 57.
Prices for 1905 in Bulletin No. 63.
Prices for 1906 in Bulletin No. 69.

It is important that the greatest care be exercised in the choice of commodities in order that a simple average of their relative prices shall show a general price level. In the present compilation 258 commodities are shown, and it has been the aim of the Bureau to select only important and representative articles in each group. The number of articles included is larger than has heretofore been used in similar compilations, with one exception. The use of a large number of articles, carefully selected, minimizes the effect on the general price level of an unusual change in the price of any one article or of a few articles. It will be seen that more than one series of prices have been given in the case of articles of great importance. This has been done for the purpose of giving due weight to these important commodities, no other method of accomplishing this having been found satisfactory by the Bureau. The same means have been employed by Mr. Sauerbeck in his English prices, as explained in Bulletin No. 39, and the approximate accuracy of the same, as an indication of the variation of prices, has been proved by various tests based on the amount of production, etc.

Various methods of weighting have been attempted in connection with compilations of relative prices. One method employed by European statisticians is to measure the importance of each commodity by its annual consumption by the entire nation, the annual consumption being found by adding to the home production the amount imported and subtracting the amount exported. The method employed by the Bureau of Labor in its publication of Retail Prices of Food in the Eighteenth Annual Report and in Bulletin Nos. 59, 65, and 71, consisted in giving to the various articles of food an importance based upon their average consumption in normal families. While it was possible to determine the relative importance as far as the consumption of food is concerned, there are, of course, many commodities whose importance can not be measured by this method. The impossibility of securing even approximately accurate figures for annual consumption in the United States of the commodities included in this compilation renders this method unavailable for the Bureau.

It has been thought best in the present series of index numbers, after a careful consideration of all methods of weighting, simply to use a large number of representative staple articles, selecting them in such a manner as to make them, to a large extent, weight themselves. Upon a casual examination it may seem that by this method a comparatively unimportant commodity—such, for instance, as tea—has been given the same weight or importance as one of the more important commodities, such as wheat. A closer examination, however, discloses the fact that tea enters into no other commodity under consideration, while wheat is not only quoted as the raw material, but enters into the two descriptions of wheat flour, the two descriptions of crackers, and the three descriptions of loaf bread.

In securing these prices an effort has been made to include staple commodities only. In a number of instances it was found possible to continue prices for the same commodities that were included in the Report on Wholesale Prices, Wages, and Transportation, submitted by Mr. Aldrich from the Senate Committee on Finance, March 3, 1893. Many articles which were included in that report are no longer manufactured, or, if still manufactured, have ceased to be important factors in the market. On the other hand, a number of articles not shown in that report have become of such importance as to render necessary their inclusion in any study of the course of prices.

Although in the case of commodities of great importance more than one series of quotations have been used, in no case has an article of a particular description been represented by more than one series of quotations. For this reason the terms "series of quotations" and "commodities" have been used interchangeably in this report.

In the record of prices for the eighteen years from 1890 to 1907, 248 series of quotations have been secured for the entire period and an additional 13 for some portion of the period. No quotations are shown for imported tin plate since 1898, no quotations for Ashton's salt since 1903, and no quotations are shown for Beaver overcoatings since 1905, which leaves 258 series of quotations for the year 1907.

Material changes in the description of 3 articles were made in 1902, of 2 articles in 1903, of 1 article in 1904, of 5 articles in 1905, of 7 articles in 1906, and of 3 articles in 1907. For 6 of these articles the trade journals no longer supply satisfactory quotations, the manufacture of the particular grades of 8 previously quoted has been discontinued by the establishments heretofore furnishing quotations, and for 7 articles the substituted descriptions more nearly represent the present demands of the trade.

In making these substitutions, with two exceptions in women's dress goods, articles were supplied corresponding as closely as possible to those which were previously used.

The prices quoted in every instance are wholesale prices. Wholesale prices have invariably been used in compilations which have been made for the purpose of showing changes in the general price level of all commodities. They are more sensitive than retail prices and more quickly reflect changes in conditions. Retail prices usually follow the wholesale, but not generally in the same proportion. The margin between them in the case of some commodities is so great that slight changes in the wholesale price do not affect the retail price. Changes in the wholesale price, which last for a short time only, do not usually result in corresponding changes in the retail price.

The net cash prices are shown for textiles and all articles whose list prices are subject to large and varying discounts. In the case of a number of articles, such as white pine, nails, etc., however, whose prices are subject to a small discount for cash, no deduction has been made.

The prices have been collected from the best available sources, such as standard trade journals, officials of boards of trade, chambers of commerce, and produce exchanges, and leading manufacturers or their selling agents.

The prices quoted are usually the prices in the New York market, except for such articles as have their primary market in some other locality. For grains, live stock, etc., for example, Chicago prices are quoted; for fish, except salmon, Boston prices; for tar, Wilmington, N. C., prices; for Elgin creamery butter, Elgin, Ill., prices, etc. The prices for textiles are the prices in the general distributing markets, such as New York, Boston, and Philadelphia; and where no market is mentioned in the prefatory note to Table I it should be understood that the prices are for the general market.

The following table shows the different markets and the number of articles quoted for each market:

NUMBER OF COMMODITIES OR SERIES OF QUOTATIONS IN 1907, CLASSIFIED BY MARKETS FOR WHICH SECURED.

Market.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous	Total.
New York	2	43	2	9	21	23	9	6	12	127
Chicago	14	5			1					20
Factory, mine, wells, etc.				3	1	2		3		9
Pittsburg					7					7
Philadelphia					4					4
Boston		3								3
Trenton, N. J								3		3
Cincinnati				1	1					2
Eastern markets (Balt., Boston, N. Y., Phila.)			2							2
Buffalo						1				1
Elgin, Ill		1								1
La Salle, Ill					1					1
Peoria, Ill									1	1
Washington, D. C		1								1
Wilmington, N. C						1				1
General market			71		2			2		75
Total	16	53	75	13	38	27	9	14	13	258

As regards the description of the commodity, it should be stated that the greatest care has been taken to secure prices throughout the period from 1890 to 1907 for a commodity of precisely the same description. Changes in quality are, of course, reflected in prices, and for this reason note has been made of any important changes which have occurred. In the case of certain commodities, such as butter, eggs, etc., prices for the best quality have been taken in order to avoid frequent changes in grade. It should also be stated in this connection that in the case of commodities for which prices were secured from the Oil, Paint, and Drug Reporter the lowest quotations were taken where a range of prices was found, because of the fact that, in that publication, these represent the prices of large lots, while the high quotations represent the prices of smaller lots.

Weekly quotations have been secured in the case of all articles which are subject to frequent fluctuations in price, such as butter, cheese, eggs, grain, live stock, meats, etc. In the case of articles whose prices are more stable, monthly or annual quotations have been taken. The following table shows the number of series of weekly, monthly, and annual price quotations:

NUMBER OF COMMODITIES OR SERIES OF QUOTATIONS, CLASSIFIED AS TO THEIR FREQUENCY OF QUOTATION IN 1907.

Frequency of quotation.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and implements.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous.	Total.
Weekly	13	22	1	1					1	38
Monthly	3	31	64	12	38	27	9	14	12	210
Annually			10							10
Total	16	53	75	13	38	27	9	14	13	258

The character of each series of quotations as regards frequency is shown in all cases in Table I in a prefatory note which states fully the date of the quotations and, if weekly, whether the quotations are for some particular day of the week, the average for the week, or the range for the week. The majority of the weekly quotations show the price on Tuesday, and if for any reason Tuesday's price was not obtainable the first price in the week has been taken. The quotations from trade and other journals, when credited to the first of each month, are not in all instances the price for the exact day stated, as it is a common practice of the daily papers which make a specialty of market reports to devote certain days to the review of the market of certain articles. For example, the Boston Herald quotes fish on Saturday only. The prices are, however, the earliest prices quoted in the journal to which the article is credited. It should also be stated that the monthly prices credited to weekly publications are the earliest quotations shown in such publications for each month.

The weight of a loaf of bread is, in some localities, regulated by statute, while in many others the price per loaf is not affected by changes in the price of flour, yet the weight of the loaf is changed from time to time. During 1904, with the advance in the price of flour, the weight of the loaf was decreased in some localities. For this reason the relative prices of bread are computed on the price per pound and not per loaf. Table I shows the price per loaf, the price per pound, and the weight each month during 1907.

The average price for the year was obtained by dividing the sum of the quotations for a given commodity by the number of quotations shown. For example, the sum of the Tuesday's prices of cotton for 1907 (shown in Table I) was $6.2960, and the number of quotations 53. The former figure divided by the latter gives $0.11879 as the average price for the year. Where a range was shown the mean price for each date was found, and this was used in computing the yearly average as above described. The reader will understand that, in order to secure for any commodity a strictly scientific average price for the year, one must know the quantity marketed and the price for which each unit of quantity was sold. It is manifestly impossible to secure such detail, and even were it possible the labor involved in the compilation would make this method prohibitive. It is believed that the method adopted here, which is also that used in the construction of other index numbers, secures results which are quite as valuable for all practical purposes.

Owing to the unusual method of fixing the scale of prices of cut and wire nails and the difficulties encountered in securing satisfactory quotations of prices, it was thought best to enter into a somewhat lengthy explanation in Bulletin No. 39, and the reader is referred to pages 226 to 231 of that number.

The base prices of nails are the prices quoted by the trade, and while they could not be used, for reasons explained in Bulletin No. 39, in computing relative prices, they form the basis from which are calculated the actual prices for 8-penny nails, as given in Table I, and therefore the base prices of both cut and wire nails during 1907 are given in the following tables:

NAILS: CUT, BASE SIZES.

[Price per 100-pound keg, f. o. b. Pittsburg, on the first of each month; quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
January.....	$2.05	April......	$2.05	July........	$2.05	October....	$2.10
February....	2.05	May........	2.05	August ..	2.10	November..	$2.00-2.05
March......	2.05	June..	2.05	September .	2.15	December..	2.00-2.05
						Average..	2.0625

NAILS, WIRE, BASE SIZES.

[Price per 100-pound keg, f. o. b. Pittsburg, on the first of each month, quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
January....	$2.00	April..... .	$2.00	July........	$2.00	October....	$2.05
February....	2.00	May...... .	2.00	August...	2.00	November..	2.05
March.....	2.00	June..... .	2.00	September..	2.05	December..	2.05
						Average..	2.0167

In previous Bulletins quotations have been published for two descriptions of scoured wool, but in view of the fact that such a large proportion of the wool is now being marketed unwashed, monthly price quotations for a standard grade of unwashed wool have also been secured. For comparative purposes the quotations on the scoured basis are continued in Table I. No relative prices were computed from the quotations of unwashed wool. It may be necessary at some future time to use these quotations in the index number, and it was considered advisable to secure them from year to year.

The quotations of actual prices of unwashed wool on the first of each month for 1890 to 1903 were shown in Bulletin No. 51 (page 237), for 1904 in Bulletin No. 57 (page 405), for 1905 in Bulletin No. 63 (page 352), and for 1906 in Bulletin No. 69 (page 264).

The prices for 1907 follow:

WHOLESALE PRICE OF UNWASHED OHIO MEDIUM FLEECE WOOL (ONE-FOURTH AND THREE-EIGHTHS GRADE), 1907.

[Price per pound in the eastern markets (Baltimore, Boston, New York, and Philadelphia) on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
January.....	$0.33	April.......	$0.33	July........	$0.33	October....	$0.32
February....	.33	May........	.32	August.....	.32	November..	.32
March.......	.33	June........	.33	September..	.32	December...	.32
						Average..	.3250

On preceding pages of this report an opportunity has been afforded to note the extent of the change in wholesale prices between 1906 and 1907, by groups of commodities. The following table shows the per cent of increase or decrease in the average wholesale price in 1907 for each individual article as compared with the price in 1906:

PER CENT OF INCREASE OR DECREASE IN THE AVERAGE WHOLESALE PRICES OF COMMODITIES IN 1907 COMPARED WITH 1906.

[For a more detailed description of the articles see Table I, page 317 et seq.]

Farm products, 16 articles.

Article.	Per cent of increase or decrease.
PRICE INCREASED.	
Hops: New York State, choice	6.7
Cattle: steers, choice to extra	6.8
Flaxseed: No. 1	7.1
Cotton: upland, middling	7.7
Cattle: steers, good to choice	8.5
Corn: No. 2, cash	14.0
Wheat: cash	14.5
Rye: No. 2, cash	25.9
Hay: timothy, No. 1	30.7
Oats: cash	37.1
Barley: by sample	49.8
PRICE DECREASED.	
Sheep: native	1.0
Hogs: light	1.8
Hogs: heavy	2.5
Hides: green, salted, packers, heavy native steers	5.7
Sheep: western	7.5

Food, etc., 53 articles.

Article.	Per cent of increase or decrease.
PRICE SAME AS IN 1906.	
Bread: crackers, Boston	
Bread: crackers, soda	
Bread: loaf, Washington market	
Bread: loaf, homemade	
Bread: loaf, Vienna	
Soda: bicarbonate of	
PRICE INCREASED.	
Meat: pork, salt, mess	0.3
Meat: bacon, clear sides	1.3
Vinegar: cider, Monarch	1.5
Fruit: raisins, California, London layer	1.7
Fish: cod, dry, bank, large	1.8
Sugar: 96° centrifugal	1.8
Sugar: 89° fair refining	2.1
Sugar: granulated	3.0
Lard: prime contract	3.7
Starch: pure corn	4.0
Meat: hams, smoked	5.5
Eggs: new-laid, fancy	6.0
Vegetables, fresh: onions	6.3
Meal: corn, fine white	7.2
Meal: corn, fine yellow	7.5
Cheese: New York, full cream	7.7
Flour: wheat, winter straights	10.3
Meat: beef, salt, extra mess	11.0
Salt: American	11.0
Milk: fresh	11.3
Glucose	11.6
PRICE INCREASED—concluded.	
Butter: creamery, Elgin	12.3
Rice: domestic, choice	12.7
Meat: beef, fresh, native sides	13.3
Butter: creamery, extra	13.7
Flour: wheat, spring patents	14.0
Fruit: currants	14.4
Butter: dairy, New York State	14.9
Flour: buckwheat	15.1
Tallow	17.4
Flour: rye	19.7
Fruit: apples, sun dried	19.9
Molasses: New Orleans, open kettle	20.2
Meat: beef, salt hams, western	20.8
PRICE DECREASED.	
Meat: bacon, short rib sides	0.1
Fish: salmon, canned	.9
Tea: Formosa, fine	2.1
Fish: herring, shore	3.1
Meat: mutton, dressed	3.8
Fish: mackerel, salt	5.9
Beans: medium, choice	6.5
Fruit: prunes, California, in boxes	8.2
Vegetables, fresh: potatoes, white	10.3
Spices: pepper, Singapore	12.7
Fruit: apples, evaporated	13.8
Coffee: Rio No. 7	18.9
Spices: nutmegs	19.2

PER CENT OF INCREASE OR DECREASE IN THE AVERAGE WHOLESALE PRICES OF COMMODITIES IN 1907, COMPARED WITH 1906—Continued.

Cloths and clothing, 75 articles.

Article.	Per cent of increase or decrease.
PRICE SAME AS IN 1906.	
Blankets: 11-4, 5 pounds to pair, cotton warp, all wool filling	....
Blankets: 11-4, 5 pounds to pair, cotton warp, cotton and wool filling	....
Broadcloths	....
Linen shoe thread: 10s, Barbour	....
Overcoatings: covert cloth, light weight	....
Suitings: indigo blue, all wool, 14-ounce, Middlesex standard	....
Suitings: indigo blue, all wool, 16-ounce	....
Underwear: white, all wool, full fashioned, 18-gauge	....
Underwear: white, merino, 60 per cent wool	....
Women's dress goods: cashmere, all wool, Atlantic J	....
Wool: Ohio, fine fleece (X and XX grade), scoured	....
PRICE INCREASED.	
Worsted yarns: 2-40s, Australian fine	0.3
Women's dress goods: Poplar cloth	.4
Flannels: 4-4, Ballard Vale	.5
Suitings: serge, Washington Mills	.5
Wool: Ohio, medium fleece	.6
Leather: harness, oak	.7
Leather: sole, oak	.7
Boots and shoes: men's vici calf, Blucher bal	.9
Sheetings: brown, Mass. mills, Flying Horse brand	1.3
Overcoatings: chinchilla, all wool	1.4
Trouserings: fancy worsted, 21 to 22 ounce	1.4
Boots and shoes: men's brogans	1.5
Women's dress goods: cashmere, 36-inch, Hamilton	2.6
Women's dress goods: Danish cloth	2.7
Linen thread: 3-cord, Barbour	3.5
Women's dress goods: cashmere, cotton warp, Atlantic F	3.6
Sheetings: brown, Atlantic A	3.9
Carpets: Wilton, 5-frame, Bigelow	4.0
Sheetings: brown, Indian Head	4.1
Leather: sole, hemlock	4.2
Carpets: ingrain, 2-ply, Lowell	4.3
Boots and shoes: men's vici kid shoes, Goodyear welt	5.1
Drillings: 30-inch, Stark A	5.7
Carpets: Brussels, 5-frame, Bigelow	5.8
Drillings: brown, Pepperell	6.5
Shirtings: bleached, $\overset{O}{XX}$, Wamsutta	6.5
PRICE INCREASED—concluded.	
Hosiery: women's combed Egyptian cotton hose	6.6
Leather: wax calf	7.0
Cotton flannels: 2¾ yards to the pound	7.0
Hosiery: men's cotton half hose, 84 needles	7.1
Bags: 2-bushel, Amoskeag	7.3
Tickings: Amoskeag A C A	8.7
Sheetings: brown, Pepperell R	8.9
Hosiery: women's cotton hose, seamless, fast black	9.7
Cotton yarns: northern, cones, 10/1	10.0
Sheetings: bleached, Atlantic	10.5
Boots and shoes: men's split boots, russet, bound top	10.6
Cotton flannels: 3½ yards to the pound	10.7
Hosiery: men's cotton half hose, seamless, fast black	11.1
Cotton yarns: northern, cones, 22/1	11.6
Sheetings: bleached, Wamsutta S. T	11.6
Denims: Amoskeag	12.0
Cotton thread: J. & P. Coats	12.3
Ginghams: Amoskeag	16.5
Sheetings: bleached, Pepperell	16.5
Ginghams: Lancaster	16.6
Silk: raw, Japan	21.5
Calico: American standard prints	21.6
Shirtings: New York mills, Williamsville, A1	22.9
Shirtings: Hope	24.3
Shirtings: Lonsdale	27.2
Silk: raw, Italian	29.0
Print cloths: 28-inch	31.1
Shirtings: Fruit of the Loom	36.7
PRICE DECREASED.	
Overcoatings: chinchilla, cotton warp	1.1
Worsted yarns: 2-40s, XXXX or its equivalent, white	1.2
Blankets: 11-4, 5 pounds to pair, all wool	2.4
Boots and shoes: women's solid grain shoes	2.4
Horse blankets: 6 pounds each	3.2
Overcoatings: Kersey, standard, 27 to 28 ounces	3.5
Suitings: clay worsted diagonal, 12-ounce	3.7
Suitings: clay worsted diagonal, 16-ounce	4.8
Women's dress goods: Franklin sackings	4.9
Shawls: standard, all wool (low grade), 40 to 42 ounces	16.7

Fuel and lighting, 13 articles.

Article.	Per cent of increase or decrease.
PRICE SAME AS IN 1906.	
Matches: parlor, domestic	....
PRICE INCREASED.	
Coal: anthracite, broken	0.1
Petroleum: refined, 150°	3.5
Coal: bituminous, Georges Creek (New York Harbor)	3.6
Coal: bituminous, Pittsburg, Youghiogheny	4.4
Coke: Connellsville, furnace	5.6
Petroleum: refined, for export	8.1
Petroleum: crude	8.6
PRICE DECREASED.	
Coal: anthracite, chestnut	0.8
Coal: anthracite, stove	.8
Coal: bituminous, Georges Creek (at mine)	.8
Coal: anthracite, egg	.9
Candles: adamantine	3.3

PER CENT OF INCREASE OR DECREASE IN THE AVERAGE WHOLESALE PRICES OF COMMODITIES IN 1907, COMPARED WITH 1906—Continued.

Metals and implements, 38 articles.

Article.	Per cent of increase or decrease.
PRICE SAME AS IN 1906.	
Butts: loose joint, cast	
Hammers Maydole	
Saws crosscut, Disston No. 2	
Saws: hand, Disston No. 7	
Steel rails	
Trowels. M. C. O.	
PRICE INCREASED.	
Augers: extra, ⅞-inch.	0.9
Axes. M. C. O., Yankee	1.3
Doorknobs. steel, bronze-plated	2.1
Shovels Ames No 2	2.9
Bar iron. common to best refined (Pittsburg)	3.6
Zinc. sheet	4.4
Lead. pipe	4.4
Steel sheets black, No. 27	5.5
Tin plates: domestic	5.9
Chisels extra, socket firmer	6.0
Bar iron: best refined (Philadelphia)	6.6
Steel billets	6.6
Nails wire, 8-penny, fence and common	8.1
PRICE INCREASED—concluded.	
Copper: ingot, lake	8.4
Barb wire. galvanized	8.5
Locks: common, mortise	10.6
Nails cut, 8-penny, fence and common.	12.0
Pig iron foundry No 1	13.9
Copper wire bare	13.9
Wood screws 1-inch	15.5
Pig iron Bessemer	16.9
Copper: sheet, hot rolled.	17.6
Pig iron: foundry No 2	23.9
Pig iron gray forge, southern	27.0
Vises: solid box, 50-pound	27.2
PRICE DECREASED.	
Spelter: western	0.5
Tin pig	1.2
Quicksilver	1.6
Silver bar, fine	2.1
Files 8-inch mill bastard	2.4
Lead. pig	6.1
Planes. Bailey No. 5	10.5

Lumber and building materials, 27 articles.

PRICE SAME AS IN 1906.	
Cement: Rosendale	
PRICE INCREASED.	
Lime: common	0.2
Putty	.8
Carbonate of lead: American	1.0
Oak white, quartered	1.1
Plate glass: polished, glazing, area 3 to 5 square feet	1.5
Hemlock	1.6
Plate glass: polished, glazing, area 5 to 10 square feet	3.0
Pine: yellow	4.0
Maple: hard	4.0
Cement: Portland	4.5
Oxide of zinc	5.9
Linseed oil: raw	7.2
PRICE INCREASED—concluded.	
Resin: good, strained	9.0
Doors. pine, western	9.1
Oak white, plain	9.5
Pine. white, boards	10.0
Pine. white, No. 2, barn	12.5
Poplar	14.0
Tar	18.9
Shingles red cedar	21.8
Shingles cypress.	30.3
PRICE DECREASED.	
Window glass: American, single, thirds.	0.6
Window glass American, single, firsts.	3.6
Turpentine: spirits of	4.6
Spruce	6.0
Brick: common domestic	28.0

Drugs and chemicals, 9 articles.

PRICE SAME AS IN 1906.	
Alum: lump	
Muriatic acid	
Sulphuric acid	
PRICE INCREASED.	
Alcohol: grain	2.4
Quinine: American	7.1
Glycerin: refined	22.5
Opium: natural, in cases	67.7
PRICE DECREASED.	
Brimstone: crude	3.0
Alcohol: wood, refined	43.0

PER CENT OF INCREASE OR DECREASE IN THE AVERAGE WHOLESALE PRICES OF COMMODITIES IN 1907, COMPARED WITH 1906—Concluded.

House furnishing goods, 14 articles.

Article.	Per cent of increase or decrease.	Article.	Per cent of increase or decrease.
PRICE SAME AS IN 1906.		PRICE INCREASED.	
Earthenware: plates, cream-colored	......	Table cutlery: carvers	6.7
Earthenware: plates, white granite	......	Table cutlery: knives and forks	7.2
Earthenware: teacups and saucers, white granite	......	Furniture: tables, kitchen	9.1
Glassware: nappies	......	Wooden ware: tubs, oak-grained	10.3
Glassware: pitchers	......	Furniture: bedroom sets, ash	11.9
Glassware: tumblers	......	Furniture: chairs, bedroom, maple	12.1
		Furniture: chairs, kitchen	13.0
		Wooden ware: pails, oak-grained	15.9

Miscellaneous, 13 articles.

PRICE SAME AS IN 1906.		PRICE INCREASED—concluded.	
Tobacco: smoking, gran., Seal of N. C.	......	Cotton-seed oil: summer yellow, prime	34.8
PRICE INCREASED.		Malt: western made	59.9
Paper: wrapping, manila	1.2	PRICE DECREASED.	
Proof spirits	2.0	Tobacco: plug, Climax	2.8
Rope: manila	3.0	Cotton-seed meal	5.6
Soap: castile, mottled, pure	3.2	Jute: raw	9.8
Starch: laundry	10.1	Rubber: Para Island, new	12.3
Paper: news, wood	13.7		

The most striking increases in the average prices for 1907 as compared with 1906 in the group of farm products were for barley, oats, hay, rye, wheat, and corn. The article showing the greatest decrease in price was western sheep.

The articles showing the greatest increase in price in food were beef, molasses, sun-dried apples, flour, butter, currants, rice, glucose, and milk, while the articles showing the greatest decrease were nutmegs, coffee, evaporated apples, pepper, and potatoes.

In the group of cloths and clothing there was an increase of from 10 to 36.7 per cent in 20 articles, including most of the cotton products. The principal increase in fuel and lighting was in petroleum, crude and refined, for export. Under metals and implements there was a marked increase in the prices of locks, nails, pig iron, copper wire, sheet copper, screws, and vises. In lumber and building materials there was a marked advance in timber products, but a decline in brick. Under drugs and chemicals there was a large increase in the price of opium and of glycerin, but a heavy decrease in the price of alcohol.

In the group of house furnishing goods no articles for which prices are quoted decreased in price. The principal advance in the group was in furniture and wooden ware. In the group of miscellaneous articles there was an advance in news paper, cotton-seed oil, and malt. The article in this group that showed the greatest decrease in price was rubber.

An examination of Table I in the present Bulletin in connection with Table I in Bulletin Nos. 39, 45, 51, 57, 63, and 69, shows that the prices of some of the commodities included in these index numbers were subject to frequent and decided fluctuations, while the prices of others were almost, and in two cases altogether, uniform throughout the period. The following table shows the lowest and highest quotations and the dates of the same for each of the commodities during the eighteen-year period. Only the commodities for which the quotations throughout the period have been for practically the same description of article are included in this table.

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907.

[For a more detailed description of the articles see Table I, page 347 et seq.]

FARM PRODUCTS.

Article	Lowest		Highest		Unit
	Date	Price	Date	Price	
Barley: by sample	3d week Aug 1896	$0.18½-$0.35	3d week Oct 1907.	$1.05-$1.10	Bushel
Cattle: steers, choice to extra.	4th week Apr 1896	3.85 - 4.25	3d, 4th Tues Aug, 1st Tues Sept 1902	7.60 - 9.00	100 lbs
Cattle: steers, good to choice.	2d Tues Jan 1890	3.00 - 3.90	2d, 3d, 4th Tues Aug, 1st, 2d Tues Sept 1902	6.70 - 7.60	100 lbs
Corn: No. 2, cash	2d Tues Sept 1896	19½ - .20	5th Tues May 1902.	.48½ - 1.00	Bushel
Cotton: upland, middling	1st Tues Feb, 1st, 2d Tues Nov 1898	.05$\frac{5}{16}$	1st Tues Feb 1904	.16¼	Pound
Flaxseed: No. 1	Sept 1896	.63½ - .64	July 1901	1.88	Bushel
Hay, timothy, No. 1	3d, 4th Tues July 1898	6.50 - 8.00	2d Tues June 1907	20.50 - 21.50	Ton
Hides: green, salted, packers, heavy native steers	June 1894	.0500- .0513	Dec 1906	.1650	Pound
Hogs: heavy	4th Tues July 1896	2.50 - 3.15	2d Tues Feb 1893	8.10 - 8.65	100 lbs
Hogs: light	3d Tues Sept 1896	2.80 - 3.35	2d Tues Feb 1893	7.90 - 8.25	100 lbs
Hops: N. Y. State, choice	Sept 1895	.06 - .07	Nov 1890	.45 - .47	Pound
Oats: cash	2d Tues Sept 1896	.14¼	4th Tues July 1902	.63½ - .64	Bushel
Rye: No. 2, cash	5th Tues June 1896	.28½	3d Tues Aug 1891	.97 - 1.00	Bushel
Sheep: native	5th Tues Oct 1894	.75 - 3.25	3d Tues Apr 1907.	5.00 - 7.25	100 lbs
Sheep: western	5th Tues Aug 1893.	1.00 - 3.00	3d Tues Apr 1907.	5.00 - 7.35	100 lbs
Wheat: contract grades, cash.	5th Tues Jan 1895	.48⅞ - .49⅜	2d Tues May 1898	1.73 - 1.85	Bushel

FOOD, ETC.

Article	Lowest		Highest		Unit
	Date	Price	Date	Price	
Beans: medium, choice	Apr 1897	$0.85	Sept 1901	$2.75	Bushel
Bread: crackers, Boston	May, June 1897	.05	Feb 1905 to Dec 1907.	.09	Pound
Bread: crackers, soda	May to Dec 1897.	.05½	June 1898	.08½	Pound
Bread: loaf (Washington market).	May to July 1895.	.0267	Aug 1896, Nov 1904.	.0444	Pound[a]
Bread: loaf, homemade (N. Y. market).	Jan to May 1896.	.0240	Oct 1904 to Dec 1907.	.0376	Pound[a]
Bread: loaf, Vienna (N. Y. market).	Jan to May 1896.	.0267	Oct 1904 to Dec 1907.	.0400	Pound[a]
Butter: creamery, Elgin (Elgin market).	1st Mon June 1890.	$0.13½- .14	1st Mon Mar 1891.	$0.34 - .35¼	Pound
Butter: creamery, extra (N. Y. market).	2d Tues June 1890.	.13½- .14	2d Tues Mar 1891.	.35 - .36½	Pound

[a] Before baking.

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907—Continued.

FOOD, ETC.—Continued.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Butter: dairy, N. Y. State..	3d Tues Apr 1896	$0.13 - $0.13½	2d Tues Mar 1891, 4th Tues Apr 1907.	$0.33	Pound
Cheese: N. Y., full cream..	3d Tues May 1895	.06 - .06¼	4th, 5th Tues Oct 1907.	.16¼	Pound
Coffee: Rio No. 7....	May, June, Aug, Sept 1903.	.05⅛- .05⅜	Oct 1890....	$0.18¾- .19	Pound
Eggs: new-laid, near-by...	1st Tues Apr 1897	.10¼- .10½	3d Tues Dec 1907.	.43 - .50	Dozen
Fish: cod, dry, bank, large.	Mar to Sept 1896, Aug 1897.	4.00 - 4.25	Jan to July 1907	8.00	Quintal
Fish: herring, shore round.	May to Aug 1892	2.00 - 2.25	Feb 1905.......	6.50 - 7.00	Barrel
Fish: mackerel, salt, large No. 3s.	June 1897.....	8.00 - 9.00	Sept, Oct 1890.	20.00	Barrel
Fish: salmon, canned ..	Apr 1898.. ..	1.10 - 1.30	Mar 1890......	1.75 - 2.00	12 cans
Flour: buckwheat......	Apr 1897......	1.00 - 1.15	Sept 1891.......	3.50 - 3.65	100 lbs
Flour: rye......	July 1897.....	2.00 - 2.40	Nov 1891.......	5.15 - 5.90	Barrel
Flour: wheat, spring patents.	1st Tues Nov 1894.	3.15 - 3.40	2d Tues May 1898	7.00 - 7.75	Barrel
Flour: wheat, winter straights.	2d Tues Oct to 1st Tues Nov 1894	2.40 - 2.65	2d Tues May 1898	6.25 - 6.75	Barrel
Fruit: apples, evaporated, choice.	Apr 1897..	.03½ - .03¾	Feb 1891....	.14½- .15½	Pound
Fruit: apples, sun-dried..	May 1897..	.01½ - .02½	May 1891......	.11 - .13	Pound
Fruit: currants, in barrels	Apr, May 1894..	.01½ - .01¾	Oct 1900..... ..	.12 - .12½	Pound
Fruit: prunes, California, in boxes.	May 1905.......	.03¼ - .03½	Oct 1890... ...	.12½- .13	Pound
Fruit: raisins, California, London layer	Apr 1896..	.80 - .90	Jan 1890......	2.25 - 2.75	Box
Glucose........	June 1897.....	.92½	Nov, Dec 1907...	2.48	100 lbs
Lard: prime contract ..	4th Tues July 1896	.0340	3d Tues Feb 1893.	.1315	Pound
Meal: corn, fine white.....	Sept 1896.....	.63 - .65	May 1891.......	1.69	100 lbs
Meal: corn, fine yellow. ..	Sept 1896.....	.62 - .63	May 1891.....	1.67 - 1.68	100 lbs
Meat: bacon, short clear sides	4th Tues July, 1st Tues Aug 1896	.04 - .04⅛	3d, 4th Tues Oct 1902.	.12⅜- .12½	Pound
Meat: bacon, short rib sides.	4th Tues July, 1st Tues Aug, all Sept 1896	.03⅞ - .04	4th Tues May 1893, 3d, 4th Tues Oct 1902	.12 - .12¼	Pound
Meat: beef, fresh, native sides.	4th Tues Mar 1894	.05 - .07	2d, 3d, 4th, 5th Tues July 1902.	.09 - .12¼	Pound
Meat: beef, salt, extra mess	2d, 3d, 4th weeks Aug 1892.	6.00 - 6.50	3d week May to 2d week June 1902.	14.00	Barrel
Meat: beef, salt, hams, western.	4th Tues Oct 1890, 2d Tues Nov 1891, 3d Tues Oct 1892.	12.00 -12.50	1st, 2d, 3d Tues Oct, all Nov 1907.	29.00	Barrel
Meat: hams, smoked.....	3d, 4th Tues Sept, 1st Tues Oct 1898.	.07½- .07¾	4th, 5th Tues Jan 1893.	.15 - .16	Pound
Meat: mutton, dressed....	5th Tues Oct 1895.	.03 - .06	1st Tues June 1907.	.10 - .13	Pound
Meat: pork, salt, mess, old to new.	4th Tues July, 3d Tues Sept 1896.	7.50 - 8.00	5th Tues May 1893.	21.50 -22.50	Barrel
Milk: fresh......	June 1897, June 1898.	.0175	Oct to Dec 1907..	.04	Quart
Molasses: New Orleans, open kettle.	June, July 1897.	.23 - .24	Jan to July 1900.	.44 - .55	Gallon
Rice: domestic, choice... .	Sept 1904 to May 1905.	.03⅞- .04	Aug to Nov 1891.	.06⅝- .07	Pound
Salt: American....	3d week Aug 1896 to 3d week Feb 1897, 1st, 2d, 3d weeks Oct 1898, 1st week May to 5th week Sept 1899, 1st week June to 2d week July 1903.	.55	1st week Nov 1900 to 1st week Apr 1901.	1.15	Barrel
Soda: bicarbonate of, American.	Oct, Nov 1901, June to Aug 1902.	.0095	Apr 1890, Mar to June 1891.	.0350	Pound

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907—Continued.

FOOD, ETC.—Concluded.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Spices: nutmegs	Dec 1907	$0.12 -$0.12¼	Mar 1890	$0.64 -$0.65	Pound
Spices: pepper, Singapore	Feb 1895, Jan, Feb 1896.	.04¼- .04½	Nov 1900	.13½- .13⅝	Pound
Starch: pure corn	July 1901	.04	Nov, Dec 1890	.06⅜	Pound
Sugar: 89° fair refining	4th Thurs Apr, 1st Thurs May 1894.	.02310	1st, 2d Thurs Sept, 2d, 3d, 4th Thurs Oct 1890.	.05311	Pound
Sugar: 96° centrifugal	1st Thurs Jan, 3d Thurs Apr, 4th Thurs May 1894.	.02750	1st, 2d Thurs Sept 1890.	.05921	Pound
Sugar: granulated	1st, 2d Thurs Feb 1895.	.03680	1st Thurs June 1890.	.06615-.06676	Pound
Tallow	4th Tues May 1897.	.02⅞- .03	3d Tues Feb 1893	.08¼	Pound
Tea: Formosa, fine	Oct 1903	.20 - .21	Sept 1890	.33 - .35	Pound
Vegetables, fresh: onions	May 1896	.50 - 1.00	Feb 1890	5.00 - 10.00	Barrel
Vegetables, fresh: potatoes, white.	3d week May, 3d, 4th weeks June 1896	.10 - .15	2d week June 1891	1.10 - 1.35	Bushel
Vinegar: cider, Monarch	Oct 1895 to Sept 1898, July 1900 to Sept 1901, Nov 1902 to Sept 1904	.13	Nov 1907	.19	Gallon

CLOTHS AND CLOTHING.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Bags: 2-bushel, Amoskeag.	Jan to Mar 1895.	$0.10½	Sept 1907	$0.21	Bag
Blankets: 11-4, 5 lbs. to the pair, all wool.	1895 to 1897	.75	1906	1.02½	Pound
Blankets: 11-4, 5 lbs. to the pair, cotton warp, all wool filling.	1895	.54	1906, 1907	.80	Pound
Blankets: 11-4, 5 lbs. to the pair, cotton warp, cotton and wool filling.	1895, 1896	.40	1905, 1906, 1907	.60	Pound
Boots and shoes: men's brogans, split.	Jan to June 1898.	.90	Nov 1906 to June 1907.	1.30	Pair
Boots and shoes: men's split boots, kip top, 16-in., ½ double sole. (a)	Jan to Dec 1895.	15.00	Dec 1906 to July 1907.	26.50	12 pairs
Boots and shoes: men's vici kid shoes, Goodyear welt.	Jan 1897 to Oct 1904.	2.00	Jan 1890 to Dec 1894, Dec 1906 to Dec 1907.	2.50	Pair
Boots and shoes: women's solid grain shoes, leather, polish or polka.	Jan 1893 to Dec 1894.	.75	May, June, July 1906.	1.05	Pair
Broadcloths: first quality, black, 54-in., made from XXX wool.	Jan 1895 to Dec 1896.	1.38	July 1905 to Dec 1907.	2.02	Yard
Carpets: Brussels, 5-frame, Bigelow.	Jan 1894 to June 1897.	.936	1907	1.248	Yard
Carpets: ingrain, 2-ply, Lowell.	July 1895 to June 1897.	.408	1907	.5760	Yard
Carpets: Wilton, 5-frame, Bigelow.	Jan 1895 to June 1897.	1.68	1907	2.28	Yard
Cotton flannels: 2¾ yds. to the pound.	Jan 1897 to Dec 1898.	.05¾	July to Oct 1907.	.10¼	Yard
Cotton flannels: 3½ yds. to the pound.	Jan to Dec 1898.	.04⅝	July to Oct 1907.	.08¼	Yard
Cotton thread: 6-cord, 200-yd. spools, J. & P. Coats.	July 1896 to Dec 1899.	.030503	June to Dec 1907.	.04508	Spool
Cotton yarns: carded, white, mule-spun, northern, cones, 10/1.	Dec 1898 to June 1899.	.13¼	Feb 1904	.24¼	Pound
Cotton yarns: carded, white, mule-spun, northern, cones, 22/1.	Dec 1898 to Mar 1899.	.16½	July, Aug 1907	.27½	Pound
Denims: Amoskeag	Jan to Mar 1899.	.08¼	Aug, Sept, Oct, 1907.	.14¾	Yard
Drillings: brown, Pepperell.	Nov 1898 to Jan 1899.	.04½	1907	.08¼	Yard

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[a] From 1903 to 1907, russet-bound top, 17-inch, ½ double sole.

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907—Continued.

CLOTHS AND CLOTHING—Continued.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Drillings: 30-in., Stark A..	Feb 1898........	$0.0410	May 1907.. ..	$0.0824	Yard
Flannels white, 4-4, Ballard Vale No 3	Aug, Sept 1896..	.29	Sept to Dec 1907.	.4687	Yard
Ginghams: Amoskeag.....	Apr to June 1895, July to Sept 1896, Apr to Sept 1897, Jan to Mar, July to Dec 1898	.0425	Aug, Sept 1907..	.0750	Yard
Ginghams: Lancaster....	Feb to May 1895, June to Aug 1896.	.04½	Sept to Dec 1907.	.07¼	Yard
Horse blankets: 6 lbs each, all wool.	1896.............	.52	1906..	77½	Pound
Hosiery men's cotton half hose, seamless, standard quality, 84 needles.	1899.... ...	.62½	1890, 1891	.97½	12 pairs
Hosiery women's combed Egyptian cotton hose, high spliced heel, double sole, full-fashioned.	1899, 1905	1.75	1907.	2.02½	12 pairs
Hosiery women's cotton hose, seamless, fast black, 26 to 28 oz., 160 to 176 needles.	1901.	.6615	1890.	1.2250	12 pairs
Leather sole, hemlock, nonacid, Buenos Aires, middle weights, 1st quality	May 1892....	.16	Apr, May 1900, Apr to Dec 1907.	$0.26-.27	Pound
Leather: sole, oak..... .	Sept to Nov 1896, June 1897.	$0.28-.29	Dec 1906, Jan 1907	.40 .41	Pound
Leather: wax calf, 30 to 40 lbs. to the doz., B grade	Jan to June 1890, Feb, June 1891, Aug 1894 to Jan 1895, Sept, Oct 1896, Apr, June 1897.	.55-.60	July to Nov 1895	.80 .85	Sq foot
Linen shoe thread. 10s, Barbour.	Jan 1903 to Nov 1904, Jan to Nov 1905	.8460	Nov 1893 to Sept 1894	.9405	Pound
Linen thread: 3-cord, 200-yard spools, Barbour	Apr to Dec 1891.	.7623	May to Dec 1907.	.93	12 spools
Overcoatings chinchilla, B-rough, all wool	1895 to 1897.....	1.8774	1907.	2.5575	Yard
Overcoatings: chinchilla, cotton warp, C. C grade	Nov 1896... ...	.41	Oct 1892, June, Sept 1893.	.55	Yard
Overcoatings: covert cloth, light weight, staple goods	1897............	1.9458	1890 to 1893.....	2.4616	Yard
Print cloths: 28-in., 64x64..	2d week May 1898.	.01875	1st week Aug to 3d week Nov 1907	.05250	Yard
Sheetings: bleached, 10-4, Pepperell.	Apr, May 1895..	.15¼	June to Dec 1907	.30	Yard
Sheetings. bleached, 10-4, Wamsutta S. T.	Apr 1894 to Nov 1895, May 1904 to Oct 1906.	.270	Oct 1890 to Jan 1891.	.329	Yard
Sheetings: brown, 4-4, Atlantic A.	Dec 1898........	.0421	June 1906.......	.0811	Yard
Sheetings: brown, 4-4, Indian Head.	June 1898, Jan 1899.	.05	Mar to June 1904, Aug to Dec 1907.	.08½	Yard
Sheetings: brown, 4-4, Pepperell R.	Apr, Nov, Dec 1898	.0450	Aug to Dec 1907.	.0775	Yard
Shirtings: bleached, 4-4, Fruit of the Loom.	Dec 1898........	.0538	Sept to Dec 1907	.12	Yard
Shirtings: bleached, 4-4, Hope.	Dec 1898........	.0475	July to Nov 1907	.0974	Yard
Shirtings: bleached, 4-4, Lonsdale.	Dec 1898........	.0523	July to Nov 1907	.11	Yard
Shirtings: bleached, 4-4, Wamsutta <o> XX.	Dec 1897 to Jan 1899.	.0807	July to Dec 1907.	.1125	Yard
Silk: raw, Italian, classical.	June 1894......	3.4328-3.4825	May 1907........	5.8905-5.9400	Pound
Silk: raw, Japan, filatures.	Aug 1896..... ..	2.9100-3.3950	May 1907........	5.5775-5.6260	Pound
Suitings: clay worsted diagonal, 12-oz., Washington Mills.	Feb to Apr 1897.	.6370	Aug to Dec 1905.	1.2375	Yard

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907—Continued.

CLOTHS AND CLOTHING—Concluded.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Suitings: clay worsted diagonal, 16-oz., Washington Mills.	Feb to Apr 1897.	$0.7963	Aug to Dec 1905, July to Dec 1906.	$1.4850	Yard
Suitings indigo blue, all wool, 54-inch, 14-oz , Middlesex standard	Jan to Dec 1897.	1.0465	1906, 1907	1.7100	Yard
Suitings: indigo blue, all wool, 16-oz.	1895.	1.5903	1906, 1907.	2.4180	Yard
Suitings: serge, Washington Mills 6700.	Jan 1896 to Aug 1897.	.6143	July 1906 to May 1907, Aug to Dec 1907.	1.0575	Yard
Tickings Amoskeag A. C. A.	Oct to Dec 1898.	.08¼	Aug to Dec 1907.	.14½	Yard
Underwear: shirts and drawers, white, all wool, full-fashioned, 18-gauge	Jan 1894 to Dec 1898	21.60	1906, 1907..	27.00	12 garments
Women's dress goods cashmere, all wool, 10 11 twill, 38-in , Atlantic Mills J.	Jan to Dec 1896.	.1960	Nov 1905 to Dec 1907	.3920	Yard
Women's dress goods cashmere, cotton warp, 9-twill, 4-4, Atlantic Mills F.	Oct 1895 to May 1896.	.1127	June to Dec 1907	.2254	Yard
Women's dress goods Franklin sackings, 6 4	July 1896 to July 1897.	.40⅝	June 1905 to Nov 1906.	.68⅞	Yard
Wool: Ohio, fine fleece (X and XX grade), scoured	June 1895......	.3478	June to Sept 1905	.7826	Pound
Wool Ohio, medium fleece (¼ and ⅜ grade), scoured	June 1895, June to Sept 1896.	.2903	June, July, Aug, Nov 1890.	.6210	Pound
Worsted yarns, 2-40s, Australian fine.	Nov 1895 to Mar 1896, Oct to Dec 1896.	.72	Nov 1899 to Apr 1900, Dec 1905 to Feb 1906, July 1906 to Oct 1907	1.30	Pound
Worsted yarns: 2-40s, XXX or its equivalent in quality, white, in skeins. (a)	Oct 1896 to Feb 1897	.70	Jan, Feb 1900...	1.35	Pound

FUEL AND LIGHTING.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Candles: adamantine, 6s, 14-oz.	June 1897 to Jan 1900.	$0.06⅛	Feb 1900 to June 1903.	$0.11	Pound
Coal: anthracite, broken...	June to Aug 1899.	3.111	Aug 1903..	4.4744	Ton
Coal: anthracite, chestnut.	Sept 1895.......	2.701	Jan 1904........	4.958	Ton
Coal, anthracite, egg.. ...	Sept 1895.......	2.827	Jan 1904........	4.9725	Ton
Coal: anthracite, stove....	Aug 1895........	2.891	Jan 1904........	4.9614	Ton
Coal: bituminous, Georges Creek (at mine).	Apr to July 1894, Jan to June 1895, Jan to Mar 1896.	.75	Oct 1902...	5.00	Ton
Coal: bituminous Georges Creek (f. o. b. N. Y. Harbor).	Apr 1898 to Mar 1899.	2.10	Oct 1902........	8.25	Ton
Coal: bituminous, Pittsburg (Youghiogheny).	2d Tues Mar to 1st Tues Apr 1899.	$0.04½-.04¾	3d, 4th Tues Nov 1891.	.11	Bushel
Coke: Connellsville, furnace.	Apr, May 1894..	.92	Mar, Apr 1900 ..	$3.25-4.25	Ton
Matches: parlor, domestic.	Sept 1894 to Mar 1895, May 1902 to Dec 1907.	1.50	Jan to Oct 1890.	2.00	144 boxes
Petroleum: crude..........	Oct 1892........	.51⅜	Dec 1903........	1.88¾	Barrel
Petroleum: refined, for export.	May 1893........	.051	Jan to Mar 1900.	.099	Gallon
Petroleum: refined, 150° fire test, water white.	Feb, Mar 1893...	.07⅛	Nov 1903 to Feb 1904.	.15	Gallon

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a From 1902 to 1907 designated as XXXX.

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907—Continued.

METALS AND IMPLEMENTS.

Article.	Lowest.		Highest		Unit.
	Date	Price	Date.	Price.	
Augers: extra, ¾-inch	Oct 1894 to Apr 1896, Feb 1899.	$0.1333	Feb 1906 to Dec 1907	$0.36	Each
Axes M. C. O , Yankee	Oct 1897 to Dec 1898	.375	Apr 1906 to Dec 1907.	.68	Each
Bar iron: best refined, from store (Philadelphia market)	Nov 1894, Jan, Feb 1895.	.012	Sept 1899 to Jan 1900.	.025	Pound
Barb wire galvanized	Aug 1897	1.65	Dec 1899 to Mar 1900.	4.13	100 lbs
Butts loose joint, cast, 3 x 3 inch.	Feb to July 1895, June 1897 to Jan 1900	.0292	Feb to May 1900	.0430	Pair
Chisels extra, socket firmer, 1-inch.	Apr 1894 to Dec 1895, Dec 1896 to Nov 1898.	.171	Dec 1906 to Nov 1907	.45	Each
Copper ingot, lake	June 1894	$0.0890- .0900	May 1907.	$0.25- .26	Pound
Copper sheet, hot-rolled (base sizes)	Jan, Apr 1896	.13½	Mar to July 1907	.32	Pound
Copper wire bare.	July 1894	.11	Feb to July 1907.	.275	Pound
Doorknobs. steel, bronze plated.	Jan 1890 to Apr 1895 Mar 1896 to June 1900.	.166	Oct, Nov, Dec 1906	.48	Pair
Files 8-inch mill bastard	July 1896 to June 1897.	.77	Nov 1899 to Aug 1900.	1.10	Dozen
Hammers Maydole No 1½.	Jan 1890 to Nov 1895	.350	Jan 1903 to Dec 1907	.466	Each
Lead pig	Sept 1896	.0273- .0275	Feb 1906	.0675	Pound
Lead pipe	Nov 1896 to Jan 1897.	3.60	Jan to May 1907.	7.20	100 lbs
Locks common mortise	Jan 1898 to Apr 1902	.075	Oct 1906 to Dec 1907.	.20	Each
Nails cut, 8d , fence and common.	July to Sept 1898	1.15	May to Nov 1896	2.90	100 lbs
Nails wire, 8d , fence and common	Dec 1896, Aug 1897, Aug, Dec 1898	1.35	Jan, Feb 1890	3.35- 3.40	100 lbs
Pig iron Bessemer	July 1897	9.39	Dec 1899, Feb 1900.	25 00	Ton
Pig iron: foundry No 1	July 1898	11.25	Jan 1907	27.50	Ton
Pig iron: foundry No 2	June 1897	9.40- 9.50	June 1907	26 40-26 90	Ton
Pig iron: gray forge, southern, coke.	May 1897	8.00	Jan, Feb, Apr 1907	23.00-23.50	Ton
Planes. Bailey No 5.	Mar 1895 to Dec 1899.	1.23	May to Dec 1906.	1.80	Each
Quicksilver	Jan to Mar 1894	45	Oct, Nov 1890	.79	Pound
Saws crosscut, Disston	Uniform during period.	1.6038	Uniform during period	1.6038	Each
Saws: hand, Disston No 7	Jan 1891 to Dec 1905.	12.60	Jan to Dec 1890	14.40	Dozen
Shovels: Ames No. 2	Jan 1894 to Mar 1896.	7.45	Apr to Nov 1902.	9.61	Dozen
Silver: bar, fine	Jan 1903	.48213	Aug 1890	1.16905	Ounce
Spelter: western	Feb 1895	.0315- .0325	Feb 1907	.0700- .0725	Pound
Steel billets	May 1897	13 96	Sept, Oct 1899	41.50	Ton
Steel rails	July, Nov 1898	17.00	Jan 1890	35.25	Ton
Steel sheets black, No. 27.	May 1897	.0180- .0185	Sept 1901	.0375	Pound
Tin, pig	Oct 1896	.1270	July 1907	.4275- .4300	Pound
Tin plates: domestic, Bessemer, coke, 14 x 20 inch.	Apr 1898	2.72½ - 2.77½	Dec 1899 to Sept 1900.	4.84	100 lbs
Trowels. M. C. O., brick, 10½-inch.	Uniform during period	.34	Uniform during period.	.34	Each
Vises. solid box, 50-lb.	July 1897 to Feb 1899	3.28	Dec 1906	5.95	Each
Wood screws: 1-in., No 10, flat head.	Apr to Dec 1897	.08	Jan 1892 to Mar 1894.	.21	Gross
Zinc: sheet	May 1894	3.56	Apr to July 1907.	7.91	100 lbs

LUMBER AND BUILDING MATERIALS.

Brick: common domestic	Sept 1894, Sept 1900.	$4.25	Feb 1906	$10.75-$12.00	M
Carbonate of lead: American, in oil.	Feb 1894	.0488	Jan 1907	.0735	Pound
Cement: Portland, domestic.	Oct, Nov 1904	$1.25- 1.35	Apr 1900	2.20- 2.35	Barrel
Cement: Rosendale	Nov 1898	.80	Apr 1892	1.20- 1.25	Barrel

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907—Continued.

LUMBER AND BUILDING MATERIALS—Concluded.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Hemlock	Nov 1894 to Jan 1895.	$10.75-$11.25	July 1906 to Dec 1907.	$22.00-$22.50	M feet
Lime: common	Sept to Dec 1896, July to Sept 1900.	.60	Dec 1907	1.02- 1.07	Barrel
Linseed oil: raw	Feb, July 1897	.29	July, Aug 1901	.82	Gallon
Maple: hard	June to Sept 1901.	24.00- 27.00	June to Dec 1903.	32.00- 34.00	M feet
Oak: white, plain	June to Aug 1901.	32.00- 34.00	May 1907	58.00- 65.00	M feet
Oak: white, quartered	Jan, Feb 1890	47.00- 48.00	Dec 1903 to July 1904.	80.00- 85.00	M feet
Oxide of zinc	Jan to June 1895.	.03¼	Aug 1906 to Dec 1907.	.05⅜	Pound
Pine: yellow	Jan to Apr 1896, June to Nov 1897.	15.50- 16.00	May 1906 to Dec 1907.	30.00- 31.00	M feet
Poplar	Sept 1897 to Jan 1899.	29.00- 31.00	May 1907	58.00- 65.00	M feet
Putty	Oct, Nov 1904	.0100	May 1902 to Mar 1903.	.0225	Pound
Resin: good, strained	Sept 1893	1.00	May, June 1907.	4.80	Barrel
Shingles: cypress	Jan to Dec 1897.	2.35	Mar to Oct 1907.	4.35	M
Spruce	July to Oct 1894.	11.50- 12.50	Feb to Sept 1906.	24.00- 28.00	M feet
Tar	Sept 1893, Dec 1893 to May 1894, Jan to Apr, June 1896, Apr 1898.	.90	Apr 1907	2.80	Barrel
Turpentine: spirits of	Aug, Sept 1896	.24	June 1905	.77½- .78	Gallon
Window glass: American, single, firsts, 6x8 to 10x15 inch.	May to July 1895	1.3894	Apr 1901	4.80	50 sq. ft
Window glass: American, single, thirds, 6x8 to 10x15 inch.	July, Aug 1892	1.2113	Apr 1901	3.8250	50 sq. ft

DRUGS AND CHEMICALS.

Alcohol: grain	Jan to May 1890.	$1.98	Dec 1907	$2.63	Gallon
Alcohol: wood, refined, 95%	Dec 1907	.39	Feb to Sept 1893.	1.40	Gallon
Alum: lump	Dec 1891 to Feb 1892.	.0145	Jan to June 1890.	.0188	Pound
Brimstone: crude, seconds	Sept, Dec 1895, Feb, Mar 1896.	15.00	Apr 1891, May 1898.	35.00	Ton
Glycerin: refined	Oct, Nov 1906	.11	Jan to Apr, June to Aug 1890.	.18	Pound
Muriatic acid: 20°	July 1895 to Dec 1896.	.0075	Nov 1901 to Apr 1902.	.0185	Pound
Opium: natural, in cases	Aug 1892	1.50	Aug, Sept 1907	7.00	Pound
Quinine: American	Oct, Nov 1906	.14½	Apr 1899	.40	Ounce
Sulphuric acid: 66°	Nov 1890 to Mar 1891, Apr to Aug, Oct, Nov 1894, Jan 1895 to Nov 1896.	.007	Nov 1901 to Jan 1902.	.014	Pound

HOUSE FURNISHING GOODS.

Earthenware: plates, cream-colored.	July 1895 to Dec 1897.	$0.3807	Jan to Dec 1903.	$0.4775	Dozen
Earthenware: plates, white granite.	July 1895 to Dec 1897.	.3991	Jan 1901 to Dec 1902.	.5096	Dozen
Earthenware: teacups and saucers, white granite.	July 1895 to Dec 1897	3.0907	Jan 1901 to Dec 1902	3.7632	Gross
Furniture: bedroom sets, ash.	Jan 1896 to Dec 1897.	8.75	Nov 1906 to Dec 1907.	14.50	Set
Furniture: chairs, bedroom, maple.	Jan 1897 to Sept 1898.	5.00	Nov 1906 to Dec 1907.	10.00	Dozen
Furniture: chairs, kitchen.	Jan to Sept 1898.	3.25	June to Dec 1907	6.00	Dozen
Furniture: tables, kitchen.	Jan 1896 to June 1899.	13.80	Oct 1906 to Dec 1907.	18.00	Dozen

LOWEST AND HIGHEST QUOTATIONS, 1890 TO 1907—Concluded.

HOUSE FURNISHING GOODS—Concluded.

Article.	Lowest.		Highest.		Unit.
	Date.	Price.	Date.	Price.	
Glassware: nappies, 4-in..	Jan 1896 to Dec 1900.	$0.10	Jan 1901 to Dec 1907.	$0 14	Dozen
Glassware: pitchers, ½-gallon, common.	Jan 1897 to Dec 1900.	1.00	Jan 1901 to Dec 1903	1 30	Dozen
Glassware: tumblers, ⅓-pint, common.	Jan to Dec 1899.	.13	Jan to Dec 1891.	.20	Dozen
Table cutlery: carvers, stag handles.	1897 to 1901, Jan 1902 to June 1907.	.75	1893............	.95	Pair
Table cutlery: knives and forks, cocobolo handles.	1897.	5.00	1890, 1891.......	7.75	Gross
Wooden ware. pails, oak-grained.	Apr 1895 to Jan 1896, Feb to May 1898.	1.10	Aug to Dec 1907.	2.10	Dozen
Wooden ware: tubs, oak-grained.	Oct 1894 to Nov 1899.	1.25	Jan 1890 to Aug 1891, July to Dec 1907.	1.65	Nest of 3

MISCELLANEOUS.

Cotton-seed meal....... .	Feb 1895.......	$16.00-$17 00	Jan 1902........	$33.60	2000 lbs
Cotton-seed oil: summer yellow, prime.	Nov, Dec 1897...	.21½	Feb 1893... ...	.61	Gallon
Malt: western made......	July 1897.......	.50 - .53	Oct 1907.......	$1.22 - 1 27	Bushel
Paper. news...	Oct 1899...... .	.0175- .0200	Jan 1890	.0375- .0450	Pound
Paper wrapping, manila..	Apr 1898.... .	.0375- .0400	Sept 1893.	.0600- .0675	Pound
Proof spirits......	1st wk Jan to 3d wk May 1890	1.03	3d wk Oct to 4th wk Dec 1907.	1.35	Gallon
Rope: manila, ⅜-in (a).....	Aug, Sept 1896, Sept, Oct 1897.	.0591	Dec 1899.... ...	.1576	Pound
Rubber Para Island......	Sept 1891.......	.60 - .63	June 1905.......	1.32 - 1 33	Pound
Soap: castile, mottled, pure.	May 1895 to Nov 1896, Mar 1897.	.05	Oct 1904...... .	.07¼	Pound
Starch: laundry..........	Aug, Sept, Oct 1896.	.0275	Aug, Sept, Dec 1902, Jan 1903	.0500	Pound
Tobacco: plug............	July, Aug 1892, Oct 1896 to May 1897	.36	July 1904 to Aug 1906	.49	Pound
Tobacco: smoking, granulated, Seal of N. C.	Jan 1890 to June 1898.	.50	Aug 1904 to Dec 1907.	.60	Pound

a From 1903 to 1907, $\frac{7}{16}$-inch.

In a number of instances the lowest or highest price, as shown in the foregoing table, lasted for only a short time, in some cases but a few days or even a part of a day. The groups of farm products, food, etc., and lumber and building materials show very wide variations. Good to choice steers varied from $3–$3.90 on the second Tuesday of January, 1890, to $6.70–$7.60 on the last three Tuesdays of August and the first two Tuesdays of September, 1902. Corn ranged from 19½–20 cents the second Tuesday of September, 1896, to $0.48½–$1 the fifth Tuesday of May, 1892, the high price being due to an attempt to corner corn in the Chicago market. The failure of those interested in the corner to take all corn offered at the high price, however, and the rumor that they had failed, resulted in a drop from $1 to 48½ cents within a few hours. Cotton varied from 5$\frac{5}{16}$ cents on the first Tuesday of February and the first and second Tuesdays of November, 1898, to 16¾ cents on the first Tuesday of February, 1904. Hides were 5 to 5.13 cents in June, 1894, and 16.50 cents in December, 1906.

Heavy hogs on the fourth Tuesday of July, 1896, were $2.50–$3.15, and on the second Tuesday of February, 1893, $8.10–$8.65. Hops ranged from 6–7 cents in September, 1895, to 45–47 cents in November, 1890. Oats ranged from 14¾ cents on the second Tuesday of September, 1896, to 63½–64 cents on the fourth Tuesday of July, 1902. Native sheep ranged from $0.75–$3.25 on the fifth Tuesday of October, 1894, to $5–$7.25 on the third Tuesday of April, 1907. Western sheep show a similar range. Wheat ranged from 48⅞–49⅝ cents the fifth Tuesday of January, 1895, to $1.73–$1.85 the second Tuesday of May, 1898. The high price is said to have been due to an attempt to control the price of that commodity and also, to some extent, to the war with Spain and the fear of other foreign complications. The most marked variations in the food group are in fresh vegetables, onions having varied from $0.50–$1 in May, 1896, to $5–$10 in February, 1890, and potatoes from 10–15 cents the third week of May and the third and fourth weeks of June, 1896, to $1.10–$1.35 the second week of June, 1891. Eggs varied from 10¼–10½ cents the first Tuesday of April, 1897, to 43–50 cents the third Tuesday of December, 1907. Almost all the articles in the food group show wide variations, which may be seen by referring to the foregoing table. In the cloths and clothing group the variations are not so marked, as the prices of many of the articles in this group depend more largely upon the cost of labor in producing them, while but few of them are subject to fluctuations caused by manipulation for the purpose of speculation. Print cloths varied from 1.875 cents the second week of May, 1898, to 5.25 cents from August to the third week of November, 1907. Of the raw materials in this group wool, fine fleece, scoured, varied from 34.78 cents in June, 1895, to 78.26 cents in June to September, 1905. Of the 61 articles shown under cloths and clothing in this table, 28 were quoted higher in 1907 than at any other time during the 18-year period. In the fuel and lighting group Youghiogheny coal varied from 4½-4¾ cents per bushel in March and April, 1899, to 11 cents in November, 1891; coke from 92 cents in April and May, 1894, to $3.25–$4.25 in March and April, 1900; and petroleum, crude, from 51⅜ cents in October, 1892, to $1.88⅜ in December, 1903. In the group of metals and implements, best refined bar iron from store varied from 1.2 cents per pound in November, 1894, and January and February, 1895, to 2.5 cents in September, 1899, to January, 1900; barb wire from $1.65 in August, 1897, to $4.13 in December, 1899, to March, 1900; pig iron, foundry No. 2, from $9.40–$9.50 per ton in June, 1897, to $26.40–$26.90 in June, 1907; while bar silver varied from 48.213 cents per ounce in January, 1903, to $1.16995 in August, 1890. In lumber and building materials all the articles varied widely. In drugs and chemicals, wood alcohol varied from 39 cents per gallon in December, 1907, to $1.40 in February to September, 1893; and opium from $1.50 in August, 1892, to $7 per pound in August and September, 1907. In house furnishing goods, kitchen chairs were $3.25 per dozen from January to September, 1898, and $6 from June to December, 1907. In the miscellaneous group, cotton-seed meal, cotton-seed oil, paper (news), rope, and rubber show wide variations.

Table II.—Monthly actual and relative prices of commodities in 1907 and base prices (average for 1890–1899), pages 396 to 414.—This table shows for each article the monthly price, which is either the average price for the month or the price on some day of the month. On the line below the December price is given the average price for the year, and on the line above the January price is given the average price during the 10 years from 1890 to 1899, which average price is designated the base price.

The monthly prices for such articles as are quoted weekly in Table I were found by dividing the sum of the quotations in each month as shown in Table I by the number of quotations in each month, except for articles in which a range is quoted, for which articles the average is computed from the mean of the weekly prices. In Table I single quotations for 1907 are shown for 10 articles. The price of one of these is maintained throughout the year, the prices of three represent the bulk of the sales and are maintained generally, and the prices of four are averages for the year. For each of these eight articles the annual price has been shown in Table II as the price during each month. The other two articles for which single quotations for 1907 are shown in Table I have a September price, which represents the bulk of these sales for the year, and the relative price for 1907 was therefore computed from that price, but the price at which sales were made from January to March was the price of September, 1906; from April to August the price of April, 1907, and from September to December the price of September, 1907. Consequently these prices were used in this table presenting monthly prices.

It was impossible to secure quotations during all of the months of the year for 5 of the 258 articles, viz: Buckwheat flour, sun-dried apples, herring, salmon, and potatoes of the kind quoted.

The average price for 1907 was obtained, as has already been explained, by dividing the sum of the quotations for the year as shown in Table I by the number of quotations for the year. The average price for the 10-year period, 1890 to 1899, was obtained by dividing the sum of the average prices of the 10 years by 10. This average price for 10 years has been adopted as the base for all relative prices. For the 10 articles which do not show prices for the entire period of 10 years, 1890 to 1899, the base in each case is the average of the years prior to and including 1899.

In explanation of the term base or standard, as used in connection with relative prices or index numbers, it may be stated that in reducing a series of actual prices to relative prices a base must first be chosen, and this may be either a single quotation, the average price for 1 year, or the average for 2 or more years. If the price for a single year is chosen it is essential that that year be a normal one, for if prices are high in the year chosen for the base any subsequent fall will be unduly emphasized, while, on the other hand, if prices are low any subsequent rise will be emphasized. For the reason that all the commodities probably never present a normal condition as regards prices in any one year, it was decided that an average price for a number of years would better reflect average or approximately normal conditions and form a more satisfactory base than would the price for any single year. The period chosen as this base was that from 1890 to 1899- a period of 10 years. The average price of each article for the base period was found, as previously stated, by adding together the average yearly prices of that article for all of the 10 years and dividing by 10.

The relative prices as shown in this and other tables have been calculated in the usual manner and represent simply the percentage which each monthly or yearly price is of the base price. The average price for the first 10 years of the period, that is, the base, always represents 100, and the percentages for each month or year enable the reader to measure readily the rise and fall from month to month or from year to year of the prices of each single commodity, of any group of commodities, or of all the 258 commodities involved. These commodities are arranged in alphabetical order under each of the nine general groups, as in Table I.

In order that the method pursued may be more readily understood, the reader is referred to the table itself, as given on pages 396 to 414. Taking up the first commodity shown, barley, we find that the average price per bushel for the base period, 1890 to 1899, inclusive, was 45.34 cents; the average price for January, 1907, was 54.25 cents; that for February was 59.13 cents; that for March 69.45 cents, etc. The relative price for the base period, as heretofore explained, is always placed at 100, and is so given in the table. The relative price for January, 1907, is shown to be 119.7, or 19.7 per cent higher than the base or average for the 10 years. In February the relative price was 130.4, or 30.4 per cent above the base; in March the relative price was 153.2, or 53.2 per cent above the base; in April it was 155.9, or 55.9 per cent above the base; in May it rose to 171.8, or 71.8 per cent above the base; in June it was 164.3, or 64.3 per cent above the base; in July it was 145.9, or 45.9 per cent above the base, and in August it rose again to 154.6, or 54.6 per cent above the base; in September it advanced to 201.3, or 101.3 per cent above the base; it advanced again in October, declined in November, and in December rose to 213.9. The relative price for the year 1907 was 169.0, or 69 per cent above the base. The figures in each case were secured according to the method already explained, that for January, 1907, being expressed as follows:

Average price for base period	$0.4534
Average price for January, 1907	$0.5425
Relative price for base period	100.0
Relative price for January, 1907	119.7

The remainder of the table may be analyzed in a similar manner.

The value of prices given in this relative form, it will readily be seen, consists in the means afforded for tracing and measuring the changes from month to month, from year to year, or from period to period, and in the combination of prices of a sufficient number of commodities to show the general price level. It must not be assumed that a system of relative prices of representative commodities will enable one to trace the causes of changes in the general price level or to determine the effect of such changes on any class of consumers or on all consumers. The use of such a system is to show the general course of prices from time to time of one commodity, of a group of commodities or of all commodities.

It is stated on page 308 that certain articles are no longer quoted and other articles of the same class are substituted.

An explanation of the method of computing the relative price of these articles is necessary, and harness leather will be used as an illustration. It must be understood that during the years when "country middles" were quoted, they were assumed to represent the several grades of oak harness leather—that is, that the course of prices of a standard grade of oak harness leather in an index number of prices fairly represents the course of prices of the various grades of oak harness leather. Therefore, when it became necessary to substitute, in 1902, packers' hides for the country middles, prices were secured for packers' hides for both 1901 and 1902, and it was found that the average price for the year 1902 was the same, or 100 per cent of the average price for the year 1901. The relative price of country middles in 1901, as shown in Table IV, was 114.7 (average price for the ten years, 1890 to 1899, equals 100), and if country middles represented oak harness leather at that time, and packers' hides now represent the class, harness leather (shown by the price of packers' hides) remained the same price in 1902 as in 1901, and the relative price in 1902 was therefore 100 per cent of 114.7, the relative price in 1901, which gives 114.7 as the relative price in 1902. The same method was followed in computing relative prices for each of the months of 1902. The average price of harness leather in 1907 was 0.67 per cent above the average price in

1906; therefore the relative price in 1907 was 100.67 per cent of 128.1, the relative price of 1906, which gives 129.0 as the relative price in 1907. The same method of computing the relative prices was followed for boots and shoes, calico, hosiery, leather, shawls, sheetings, women's dress goods, bar iron, doors, plate glass, white pine, shingles, and jute. For trouserings and underwear the exact grade quoted for 1903 was not manufactured in 1902. The manufacturer of trouserings, however, estimated that one-half of the advance in price over the price for the grade quoted for previous years was due to the fact that it was a better article and the other half to the advance in price of material and cost of manufacture. The advance was $0.1125 per yard over the price in 1902; one-half of this, $0.05625, was added to the 1902 price of the 22 to 23 ounce trouserings to secure a theoretical 1902 price for the 21 to 22 ounce trouserings, and the 1903 relative price was then computed as above. Underwear was arbitrarily given the same relative price in 1903 as in 1902, as the all-wool underwear manufactured by the same firm showed no change in price. The 1907 relative prices of trouserings and underwear were found in the same way as explained above for harness leather.

Table III.—Monthly relative prices of commodities in 1907, pages 415 to 426.—This table repeats the relative monthly price for each article as given in Table II. In addition, similar commodities have been grouped and the average of the relative prices shown for the commodities in each subgroup and in each of the nine general groups. The averages in all cases were found by dividing the sum of the relative prices by the number of commodities in the group under consideration. It should be borne constantly in mind that the term commodity is used here and elsewhere in a specific sense, "native" and "western" sheep, for example, being considered different commodities. The method of securing average relative prices in this and other tables was as follows: The average relative price of cattle was found by adding the relative prices of the two grades of cattle and dividing the sum by 2. The average for hogs was found in the same manner, and also the average for sheep. The average for live stock was found by dividing the sum of the relative prices of both grades of cattle, both grades of hogs, and both grades of sheep by 6, the total number of different descriptions of commodities or series of quotations in the live-stock group. The average relative price of each of the nine general groups was found by dividing the sum of the relative prices of the different descriptions of commodities for each month by the number of these commodities or series of quotations considered. The sum of the relative prices in January, 1907, of the commodities shown under the general group, food, etc., for example, is 6,200.3, which amount divided by 53, the number of different descriptions of commodities or series of quotations considered in that group, gives 117.0 the average for the

group, food, etc., for January, 1907. As explained in the discussion of Table II, it was impossible to secure quotations during all of the months of the year for 5 of the 258 articles. In order of arrangement these are: Buckwheat flour, herring, salmon, sun-dried apples, and potatoes. In presenting monthly relative prices for these articles a nominal relative price (which is the same as the relative price for the month in which the article was last quoted) has been entered in this table for the months for which no price quotation is shown in Table I. This nominal price enters into the average for the subgroup, the general group, and "all commodities" for that month.

In the following table the December, 1907, relative price is compared with the average for 1890 to 1899. The average price for 1890 to 1899 is in every case the base, or 100 per cent. Only the commodities for which the quotations throughout the 18-year period have been for practically the same description of article are included below. In using this table it must be borne in mind that the comparison is between the prices for December, 1907, and the average prices for the base period.

RELATIVE PRICES, DECEMBER, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899.

[For a more detailed description of the articles see Table I, page 347 et seq Average price for 1890-1899 100.0.]

Farm products, 16 articles.

Article	Relative price, December, 1907.	Article	Relative price, December, 1907.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Hogs: light	105.3	Corn: No 2, cash	155.8
Hogs: heavy	105.4	Oats: cash	184.7
Cattle: steers, good to choice	108.6	Barley: by sample	213.9
Cattle: steers, choice to extra	109.7	PRICE DECREASED.	
Hides: green, salted, packers, heavy native steers	126.5	Flaxseed: No. 1	94.1
Wheat: contract grades, cash	128.3	Hops. New York State, choice	93.2
Rye: No. 2, cash	148.4	Sheep: native	91.0
Hay. timothy, No 1	149.6	Sheep: western	86.5
Cotton: upland, middling	151.9		

Food, etc., 51 articles.

PRICE INCREASED.		PRICE INCREASED—continued.	
Bread: loaf (Washington market)	100.6	Vinegar: cider, Monarch	121.8
Fish: mackerel, salt, large No. 3	102.6	Meat. bacon, short rib sides	123.6
Vegetables, fresh: onions	103.0	Meat. bacon, short clear sides	125.9
Meat: mutton, dressed	104.1	Tallow	126.0
Vegetables, fresh: potatoes, white	104.2	Meal: corn, fine white	126.4
Rice: domestic, choice	107.0	Flour: wheat, spring patents	127.1
Meat: hams, smoked	108.5	Lard: prime contract	127.7
Starch: pure corn	109.5	Butter: creamery, extra (New York market)	128.7
Meat: beef, fresh, native sides	112.8	Meat. pork, salt, mess, old to new	130.0
Bread: loaf, Vienna (New York market)	113.6	Meal. corn, fine yellow	130.3
Salt: American	116.4	Butter: creamery, Elgin (Elgin market)	130.4
Fruit: raisins, California, London layer	116.6	Fish: cod, dry, bank, large	132.1
Flour: wheat, winter, straights	117.3	Meat: beef, salt, extra mess	132.5
Fruit: apples, evaporated, choice	118.1	Bread: crackers, Boston	133.7
Bread: loaf, homemade (New York market)	118.6	Butter: dairy, New York State	135.4
Spices: pepper, Singapore	118.6	Fruit: apples, sun-dried	135.9
Molasses: New Orleans, open kettle	120.6		

RELATIVE PRICES, DECEMBER, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

Food, etc., 52 articles—Concluded.

Article.	Relative price, December, 1907.
PRICE INCREASED—concluded.	
Beans: medium, choice	137.0
Meat: beef, salt, hams, western	145.9
Milk: fresh	156.9
Cheese: New York, full cream	158.6
Flour: buckwheat	160.9
Flour: rye	162.0
Fish: herring, shore, round	172.1
Fruit: currants, in barrels	181.6
Eggs: new-laid, fancy, near-by	204.8
PRICE DECREASED	
Sugar: 96° centrifugal	98.1
Sugar: 89° fair refining	96.9
Sugar: granulated	96.3
Bread: crackers, soda	90.5
Tea: Formosa, fine	81.0
Fruit: prunes, California, in boxes	80.0
Soda: bicarbonate of, American	62.2
Coffee: Rio No. 7	44.8
Spices: nutmegs	28.1

Cloths and clothing, 58 articles

Article.	Relative price, December, 1907.
PRICE INCREASED.	
Linen shoe thread: 10s, Barbour	102.1
Sheetings: bleached, 10-4, Wamsutta S. T	105.1
Silk: raw, Japan, filatures, No. 1	105.6
Boots and shoes: men's vici kid shoes, Goodyear welt	108.7
Linen thread: 3-cord, 200-yard spools, Barbour	109.1
Wool: Ohio, medium fleece (¼ to ⅜ grade), scoured	112.5
Leather: sole, oak	114.5
Underwear: shirts and drawers, white, all wool, full-fashioned, 18 gauge	115.8
Broadcloths: first quality, black, 54-inch, made from XXX wool	116.6
Silk: raw, Italian, classical	118.1
Leather: wax calf, 30 to 40 pounds to the dozen, B grade	118.4
Shirtings: bleached, 4-4 Wamsutta $\overset{\mathrm{O}}{\mathrm{XX}}$	118.7
Blankets: 11-4, 5 pounds to pair, all wool	119.0
Boots and shoes: women's solid grain shoes, leather, polish or polka	119.3
Overcoatings: chinchilla, B-rough, all wool	119.4
Women's dress goods: Franklin sackings, 6-4	119.9
Carpets: ingrain, 2-ply, Lowell	121.2
Boots and shoes: men's brogans, split	121.3
Cotton yarns: carded, white, mule-spun, northern, cones, 22/1	121.9
Carpets: Wilton, 5-frame, Bigelow	123.7
Cotton yarns: carded, white, mule-spun, northern, cones, 10/1	124.4
Flannels: white, 4-4, Ballard Vale No. 3	124.4
Carpets: Brussels, 5-frame, Bigelow	124.7
Worsted yarns: 2-40s, Australian fine	125.7
Suitings: indigo blue, all wool, 16-ounce	126.2
Ginghams: Lancaster	126.5
Worsted yarns: 2-40s, XXXX or its equivalent in quality, white, in skeins	129.1
Suitings: indigo blue, all wool, 54-inch, 14-ounce, Middlesex standard	129.3
Blankets: 11-4, 5 pounds to the pair, cotton warp, all wool filling	130.5
Horse blankets: 6 pounds each, all wool	130.9
PRICE INCREASED—concluded.	
Wool: Ohio, fine fleece (X and XX grade), scoured	130.9
Ginghams: Amoskeag	131.3
Women's dress goods: cashmere, all wool, 10-11 twill, 38-inch, Atlantic Mills J	134.9
Sheetings: brown, 4-4, Indian Head	135.8
Denims: Amoskeag	136.5
Leather: sole, hemlock, Buenos Aires, and Montana, middle weights, first quality	136.7
Tickings: Amoskeag A. C. A	136.7
Shirtings: bleached, 4-4, Williamsville, A 1	137.0
Shirtings: bleached, 4-4, Lonsdale	137.6
Cotton flannels: 3½ yards to the pound	139.1
Bags: 2-bushel, Amoskeag	139.4
Shirtings: bleached, 4-4, Hope	139.5
Sheetings: brown, 4-4, Pepperell R	140.7
Blankets: 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling	141.5
Cotton flannels: 2¾ yards to the pound	141.6
Sheetings: brown, 4-4, Atlantic A	141.8
Drillings: brown, Pepperell	144.2
Cotton thread: 6-cord, 200-yard spools, J. & P. Coats	145.4
Women's dress goods: cashmere, cotton warp, 9-twill, 4-4, Atlantic Mills F	148.3
Boots and shoes: men's split boots, russet-bound top, 17-inch, one-half double sole	152.9
Print cloths: 28-inch, 64 by 64	155.3
Drillings: 30-inch, Stark A	157.8
Sheetings: bleached, 10-4, Pepperell	159.2
Shirtings: bleached, 4-4, Fruit of the Loom	164.8
PRICE DECREASED.	
Overcoatings: covert cloth, light weight	96.9
Hosiery: men's cotton half hose, seamless, standard quality, 84 needles	95.6
Overcoatings: chinchilla, cotton warp, C. C. grade	94.2
Hosiery: women's cotton hose, seamless, fast black, 26 to 28 ounce, 160 to 176 needles	89.5

RELATIVE PRICES, DECEMBER, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

Fuel and lighting, 13 articles.

Article.	Relative price, December, 1907.	Article.	Relative price, December, 1907.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Coal: bituminous, Georges Creek (f.o.b. New York Harbor)	116.7	Petroleum: refined, 150° fire test, w. w.	151.7
Coke: Connellsville, furnace	117.8	Coal: bituminous, Georges Creek (at mine)	168.8
Coal: anthracite, broken	124.9	Petroleum: crude, Pennsylvania	195.6
Coal: anthracite, stove	130.4	PRICE DECREASED.	
Petroleum: refined, for export	134.8	Candles: adamantine, 6s, 14-ounce	95.9
Coal: anthracite, chestnut	137.5	Matches: parlor, domestic	85.4
Coal: anthracite, egg	137.7		
Coal: bituminous, Pittsburg (Youghiogheny) lump	140.0		

Metals and implements, 35 articles.

Article.	Relative price, December, 1907.	Article.	Relative price, December, 1907.
PRICE SAME AS BASE.		PRICE INCREASED—concluded.	
Saws: crosscut, Disston	100.0	Butts: loose joint, cast, 3 by 3 inch	126.6
Trowels: M. C. O., brick, 10½-inch	100.0	Pig iron: foundry No. 1	127.9
PRICE INCREASED.		Hammers: Maydole No. 1½	129.0
Saws: hand, Disston No. 7	101.3	Steel billets	130.1
Spelter: western	102.4	Pig iron: Bessemer	142.3
Barb wire: galvanized	106.1	Axes: M. C. O., Yankee	144.9
Steel rails	107.4	Pig iron: foundry No. 2, northern	146.7
Quicksilver	109.1	Vises: solid box, 50 pound	147.4
Lead: pig	111.5	Pig iron: gray forge, southern, coke	148.8
Copper wire: bare, No. 8, B. & S.	112.7	Tin: pig	163.9
Copper: ingot, lake	113.5	Chisels: extra, socket firmer, 1-inch	198.0
Files: 8-inch mill bastard	114.9	Augers: extra, ¾-inch	223.9
Planes: Bailey No. 5	115.7	Locks: common mortise	244.8
Lead pipe	115.8	Doorknobs: steel, bronze plated	265.2
Nails: cut, 8-penny, fence and common	116.3	PRICE DECREASED.	
Bar iron: best refined, from store (Philadelphia market)	119.5	Shovels: Ames No. 2	99.7
Copper: sheet, hot rolled (base sizes)	120.6	Nails: wire, 8-penny, fence and common	99.5
Zinc: sheet	121.3	Wood screws: 1-inch, No. 10, flathead	80.7
		Silver: bar, fine	73.7

Lumber and building materials, 20 articles.

Article.	Relative price, December, 1907.	Article.	Relative price, December, 1907.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Cement: Rosendale	107.1	Shingles: cypress	145.3
Carbonate of lead: American, in oil	114.7	Spruce	146.4
Window glass: American, single, thirds, 25-inch bracket (6 by 8 to 10 by 15 inch)	119.2	Turpentine: spirits of	146.6
Maple: hard	122.6	Oak: white, quartered	149.0
Lime: common	125.4	Pine: yellow, long leaf	165.2
Window glass: American, single, firsts, 25-inch bracket (6 by 8 to 10 by 15 inch)	126.4	Hemlock: 2 by 4 inch	186.0
Tar	132.8	Poplar: yellow	189.7
Oxide of zinc	134.5	Resin: good, strained	246.5
Oak: white, plain, 1-inch, 6 inches and up wide	144.3	PRICE DECREASED.	
		Linseed oil: raw	99.2
		Brick: common domestic	98.9
		Putty: bulk	75.9

Drugs and chemicals, 9 articles.

Article.	Relative price, December, 1907.	Article.	Relative price, December, 1907.
PRICE INCREASED.		PRICE DECREASED.	
Alum: lump	104.8	Brimstone: crude, seconds	94.2
Sulphuric acid: 66°	112.4	Quinine: American	65.0
Glycerin: refined	114.4	Alcohol: wood, refined, 95 per cent	40.9
Alcohol: grain	117.4		
Muriatic acid: 20°	129.8		
Opium: natural, in cases	233.0		

RELATIVE PRICES, DECEMBER, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Concluded.

House furnishing goods, 14 articles.

Article.	Relative price, December, 1907.	Article.	Relative price, December, 1907.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Earthenware: plates, white granite	102.4	Furniture: chairs, bedroom, maple	161.4
Table cutlery: knives and forks, cocobolo handles	104.8	Wooden ware: pails, oak-grained	161.7
Table cutlery: carvers, stag handles	106.3	PRICE DECREASED.	
Earthenware: plates, cream-colored	106.6		
Wooden ware: tubs, oak-grained	122.5	Earthenware: teacups and saucers, white granite	98.8
Furniture: tables, kitchen	124.7	Glassware: pitchers, ½ gallon, common	89.4
Glassware: nappies, 4-inch	125.0	Glassware: tumblers, ⅓-pint, common	84.5
Furniture: bedroom sets, ash	137.4		
Furniture: chairs, kitchen	156.8		

Miscellaneous, 12 articles.

PRICE INCREASED.		PRICE INCREASED—concluded.	
Proof spirits	117.4	Cotton-seed meal	134.8
Tobacco: smoking, granulated, Seal of North Carolina	117.9	Malt: western made	172.1
Tobacco: plug	118.6	PRICE DECREASED.	
Starch: laundry	122.1		
Soap: castile, mottled, pure	123.0	Rubber: Para Island	97.4
Rope: manila	125.8	Paper: wrapping, manila	94.9
Cotton-seed oil: summer yellow, prime	126.5	Paper: news	88.6

Of the farm products group, the prices of 12 of the 16 articles were higher in December, 1907, than the average price for 1890 to 1899, and the prices of 4 articles were lower in December, 1907, than the average for 1890 to 1899.

The December, 1907, price, compared with the average price for 1890 to 1899, shows barley 113.9 per cent above; oats 84.7 per cent above; corn 55.8 per cent above; cotton 51.9 per cent above, etc.

Of the food group, in December, 1907, eggs were 104.8 per cent above the average price for 1890 to 1899; herring 72.1 per cent above; cheese 58.6 per cent above; milk 56.9 per cent above, etc.

With these illustrations the reader is referred to the table.

The facts presented in the foregoing table are summarized in the following table, which shows the changes in prices of articles in each group, classified by per cent of change:

CHANGES IN PRICES OF ARTICLES IN EACH GROUP, CLASSIFIED BY PER CENT OF CHANGE, DECEMBER, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899.

Group.	Number of articles.	Number of articles for which price—									
		Increased					Was same as base	Decreased			
		100 per cent or more	50 or under 100 per cent.	25 or under 50 per cent.	10 or under 25 per cent.	Less than 10 per cent		Less than 10 per cent.	10 or under 25 per cent.	25 or under 50 per cent.	50 per cent or more.
Farm products	16	1	3	4	.	4		3	1	...	....
Food, etc.	51	1	6	16	11	8	...	4	2	1	2
Cloths and clothing	58		5	26	18	5	....	3	1	.	....
Fuel and lighting	13		3	5	3	.	...	1	1	..	.
Metals and implements	35	3	2	9	10	5	2	2	1	1	..
Lumber and building materials	20	1	3	9	3	1	...	2	1	...	....
Drugs and chemicals	9	1		1	3	1	...	1	..	1	1
House furnishing goods	14	.	3	2	2	4	.....	1	2	...	..
Miscellaneous	12		1	3	5	.	.	2	1	.	.
Total	228	7	26	75	55	28	2	19	10	3	3

It is seen in the above comparison of the prices of December, 1907, with the average for 1890 to 1899, that of the 16 articles in the farm products group, 12 show an increase and 4 a decrease; of the 51 in the foods, etc., group, 42 show an increase and 9 a decrease; of the 58 in the cloths and clothing group, 54 show an increase and 4 a decrease; of the 13 in the fuel and lighting group, 11 show an increase and 2 a decrease; of the 35 in the metals and implements group, 29 show an increase, 2 show the same price as the average for the base period, and 4 show a decrease; of the 20 in the lumber and building materials group, 17 show an increase and 3 a decrease; of the 9 in the drugs and chemicals group, 6 show an increase and 3 a decrease; of the 14 in the house furnishing goods group, 11 show an increase and 3 a decrease; of the 12 in the miscellaneous group, 9 show an increase and 3 a decrease. Of the 228 commodities included in the above table, 191 show an increase, 2 show the same price as the average for the base period, and 35 show a decrease. Of the 191 commodities that showed an increase in December, 1907, over the average for 1890 to 1899, 28 advanced less than 10 per cent, 55 advanced 10 or under 25 per cent, 75 advanced 25 or under 50 per cent, 26 advanced 50 or under 100 per cent, and 7 advanced 100 per cent or more. Of the 35 commodities which showed a decrease, 19 decreased less than 10 per cent, 10 decreased 10 or under 25 per cent, 3 decreased 25 or under 50 per cent, and 3 decreased 50 per cent or more.

The number and per cent of articles which showed each specified increase or decrease are given in the following table:

NUMBER AND PER CENT OF ARTICLES, BY CLASSIFIED PER CENT OF INCREASE OR DECREASE, DECEMBER, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899.

	Number of articles.	Per cent of articles		Number of articles.	Per cent of articles.
Price increased:			Price decreased		
100 per cent or more.	7	3.1	Less than 10 per cent	19	8.3
50 or under 100 per cent.	26	11.4	10 or under 25 per cent	10	4.4
25 or under 50 per cent	75	32.9	25 or under 50 per cent	3	1.3
10 or under 25 per cent	55	24.1	50 per cent or more	3	1.3
Less than 10 per cent	28	12.3			
Total	191	83.8	Total	35	15.3
Price same as base	2	0.9	Grand total	228	100.0

Of the 228 articles included in this table, it is seen that 191, or 83.8 per cent, show an increase in price; 2 articles, or 0.9 per cent, show the same price as the average for the base period, and 35 articles, or 15.3 per cent, show a decrease in price in December, 1907, as compared with the average price for the base period.

Of the 258 commodities considered in the Bureau's compilation of prices, the average price of 108 commodities was higher in December, 1907, than in December, 1906, the average price of 62 was the same in December, 1907, as in December, 1906, and the average price of 87 was lower in December, 1907, than in December, 1906. For one article there was no quotation in December, 1907.

The following table shows the relative prices of certain related articles, so grouped as to render easy a comparison of the course of their prices during the year 1907:

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES IN 1907.

[Average price for 1890-1899=100.0.]

Month.	Cattle and cattle products.						Dairy products		
	Cattle.	Beef, fresh.	Beef, hams.	Beef, mess.	Tallow.	Hides	Milk.	Butter.	Cheese.
Jan.	122.6	105.7	134.0	110.7	147.4	173.6	147.1	138.8	146.9
Feb.	124.7	104.5	136.1	115.4	153.3	172.9	137.3	148.9	148.8
Mar.	121.2	103.8	138.2	121.6	155.2	163.4	127.5	142.8	149.4
April.	121.8	108.0	138.2	121.6	144.6	153.8	127.5	139.8	152.0
May.	117.7	111.2	138.2	121.6	144.4	153.4	112.5	114.3	137.8
June.	129.0	119.2	138.2	121.6	146.7	158.8	98.0	110.0	120.4
July.	132.8	123.2	138.2	121.6	143.7	157.1	103.1	115.3	125.1
Aug.	131.0	124.9	145.1	121.6	145.7	150.6	121.2	114.6	123.5
Sept.	125.7	120.4	157.5	124.7	143.7	150.6	132.5	127.7	138.4
Oct.	124.8	121.9	159.2	127.9	137.9	156.9	156.9	132.8	159.6
Nov.	115.9	121.3	160.3	127.9	131.5	145.6	156.9	124.0	152.0
Dec.	109.2	112.8	145.9	132.5	126.0	126.5	156.9	131.5	158.6
1907.	122.9	114.7	144.0	122.5	142.8	155.3	131.4	128.5	143.3

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES IN 1907—Continued.

[Average price for 1890-1899=100.0.]

Month.	Hogs and hog products					Sheep and sheep products.		
	Hogs.	Bacon.	Hams, smoked	Mess pork	Lard.	Sheep	Mutton.	Wool.
Jan. ..	149.1	144.8	133.4	151.7	149.2	129.3	114.1	121.3
Feb...	158.8	151.7	138.5	161.2	153.7	131.0	112.7	121.3
Mar.....	151.2	146.3	136.6	156.3	144.2	137.6	120.2	119.8
Apr	150.5	141.7	136.0	152.8	138.2	145.7	132.0	119.8
May....	144.7	144.4	139.4	154.7	143.1	141.3	137.7	119.8
June....	139.0	141.4	137.5	155.3	138.2	141.9	128.5	121.7
July....	136.9	139.2	137.0	156.9	139.3	132.8	107.4	121.7
Aug....	139.9	140.0	137.2	155.8	140.5	131.8	111.1	123.7
Sept....	140.4	140.4	133.4	152.6	141.1	133.8	109.4	123.7
Oct.....	143.6	140.8	131.6	147.4	142.4	123.5	110.1	121.7
Nov	114.0	136.7	124.2	137.8	132.1	89.2	109.4	121.7
Dec.....	105.4	124.8	108.5	130.0	127.7	88.8	104.1	121.7
1907...	139.2	140.7	132.4	151.0	140.7	126.9	116.0	121.5

Month.	Corn, etc			Flaxseed, etc		Rye and rye flour		Wheat and wheat flour		Flour, etc.		
	Corn.	Glucose a	Meal.	Flaxseed.	Linseed oil	Rye	Rye flour.	Wheat	Wheat flour.	Wheat flour.	Crackers	Loaf bread.
Jan.....	108.4	148.8	125.9	103.3	90.4	116.9	119.8	97.1	90.6	90.6	112.1	110.9
Feb. .	114.2	148.8	125.9	107.3	90.4	126.8	118.3	105.8	93.0	93.0	112.1	110.9
Mar.. .	116.0	148.8	125.9	108.2	90.4	127.4	117.6	105.0	91.6	91.6	112.1	110.9
Apr ...	123.0	148.8	125.9	104.7	90.4	130.7	116.1	107.9	91.9	91.9	112.1	110.9
May....	139.4	148.8	122.3	105.6	90.4	150.3	119.1	127.7	107.8	107.8	112.1	110.9
June....	140.2	161.1	128.1	118.4	97.0	161.1	152.2	128.8	114.5	114.5	112.1	110.9
July....	142.2	161.1	130.8	112.5	99.2	161.5	153.0	128.5	115.6	115.6	112.1	110.9
Aug ...	148.6	161.1	125.9	103.1	94.8	146.8	148.5	123.7	111.7	111.7	112.1	110.9
Sept....	162.0	168.2	135.6	106.4	94.8	166.7	145.5	134.5	116.9	116.9	112.1	110.9
Oct.....	162.5	167.8	153.8	107.8	103.6	159.7	156.0	138.8	124.7	124.7	112.1	110.9
Nov	153.9	174.9	149.2	101.5	108.0	148.0	156.8	124.4	122.5	122.5	112.1	110.9
Dec.. ..	155.8	171.9	128.4	94.1	90.2	148.4	162.0	128.3	122.2	122.2	112.1	110.9
1907 ..	138.8	159.4	131.5	106.1	95.7	145.4	138.7	120.8	108.6	108.6	112.1	110.9

Month.	Cotton and cotton goods.									
	Cotton: upland, middling.	Bags 2-bushel, Amoskeag.	Calico: American standard prints.	Cotton flannels.	Cotton thread.	Cotton yarns	Denims	Drillings.	Ginghams.	Hosiery.
Jan....	139.9	132.2	105.1	133.9	120.1	131.9	122.1	142.1	113.0	93.0
Feb.....	142.0	132.2	105.1	133.9	120.1	133.2	122.1	145.8	115.2	93.0
Mar.....	143.8	132.2	114.6	133.9	120.1	131.6	124.5	145.4	115.2	93.0
Apr....	143.4	139.4	114.6	133.9	120.1	131.9	124.5	145.1	115.2	94.5
May....	154.9	139.4	114.6	140.4	120.1	131.9	124.5	151.2	115.2	94.5
June....	168.1	139.4	114.6	140.4	145.4	138.8	134.1	147.7	115.2	94.5
July....	169.5	139.4	124.2	144.4	145.4	142.9	138.9	149.3	124.6	94.5
Aug....	171.8	139.4	124.2	144.4	145.4	142.9	141.3	143.3	129.3	94.5
Sept....	163.5	150.1	133.7	144.4	145.4	140.1	141.3	150.1	133.6	97.4
Oct.....	148.5	139.4	133.7	144.4	145.4	134.4	141.3	147.2	128.9	97.4
Nov....	142.0	139.4	133.7	140.4	145.4	123.2	136.5	148.0	128.9	97.4
Dec. . .	151.9	139.4	133.7	140.4	145.4	123.2	136.5	151.0	128.9	97.4
1907...	153.0	138.5	121.0	139.5	134.8	133.9	132.3	147.2	122.0	b 97.4

a Average for 1893-1899=100.0.

b See statement on page 325.

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES IN 1907—Concluded.

[Average price for 1890-1899=100.0.]

Month	Cotton and cotton goods				Wool and woolen goods.*					
	Print cloths.	Sheetings.	Shirtings.	Tickings.	Wool.	Blankets (all wool).	Broadcloths.	Carpets.	Flannels.	Horse blankets.
Jan.	140.9	125.0	124.6	117.8	121.3	119.0	116.6	123.2	122.4	130.9
Feb.	147.6	127.3	128.7	120.2	121.3	119.0	116.6	123.2	122.4	130.9
Mar.	158.6	128.7	130.4	122.5	119.8	119.0	116.6	123.2	122.4	130.9
Apr.	158.6	129.6	133.1	122.5	119.8	119.0	116.6	123.2	122.4	130.9
May	161.3	129.4	132.1	127.2	119.8	119.0	116.6	123.2	122.4	130.9
June	170.9	133.8	135.1	127.2	121.7	119.0	116.6	123.2	122.4	130.9
July	177.3	132.4	143.9	132.0	121.7	119.0	116.6	123.2	122.4	130.9
Aug.	185.0	133.5	143.9	136.7	123.7	119.0	116.6	123.2	122.4	130.9
Sept.	185.0	133.6	145.3	136.7	123.7	119.0	116.6	123.2	124.4	130.9
Oct.	185.0	136.2	145.3	136.7	121.7	119.0	116.6	123.2	124.4	130.9
Nov.	177.9	139.3	145.3	136.7	121.7	119.0	116.6	123.2	124.4	130.9
Dec.	155.3	138.1	139.5	136.7	121.7	119.0	116.6	123.2	124.4	130.9
1907	167.4	132.2	137.4	129.4	121.5	119.0	116.6	123.2	123.1	130.9

Month	Wool and woolen goods						Hides, leather, and boots and shoes			Petroleum.	
	Overcoatings (all wool).	Shawls.	Suitings.	Underwear (all wool).	Women's dress goods (all wool).	Worsted yarns.	Hides.	Leather.	Boots and shoes.	Crude.	Refined.
Jan.	123.5	107.0	132.8	115.8	132.0	128.4	173.6	124.4	127.3	173.6	130.9
Feb.	124.9	107.0	132.8	115.8	132.0	128.4	172.9	123.0	127.3	173.6	135.6
Mar.	124.9	107.0	132.8	115.8	132.0	128.4	163.4	124.1	127.3	179.1	135.6
Apr.	124.9	107.0	133.8	115.8	132.0	128.4	153.8	124.4	127.3	195.6	139.0
May	124.9	107.0	133.4	115.8	132.0	128.4	153.4	124.4	127.3	195.6	139.0
June	124.9	107.0	132.1	115.8	132.0	127.4	158.8	123.6	126.7	195.6	139.0
July	124.9	107.0	132.4	115.8	132.0	127.4	157.1	122.8	126.2	195.6	141.0
Aug.	124.9	107.0	133.1	115.8	132.0	127.4	150.6	121.0	125.6	195.6	141.0
Sept.	124.9	107.0	133.4	115.8	132.0	127.4	150.6	121.0	125.1	195.6	141.0
Oct.	124.9	107.0	133.4	115.8	127.4	128.4	156.9	125.1	125.1	195.6	141.0
Nov.	124.9	107.0	133.4	115.8	127.4	127.4	145.6	124.7	123.4	195.6	143.3
Dec.	124.9	107.0	133.4	115.8	127.4	127.4	126.5	123.9	122.2	195.6	143.3
1907	124.8	107.0	133.1	115.8	130.9	127.9	155.3	124.0	125.9	190.5	139.1

An examination of this table shows that during 1907, with few exceptions, related articles followed the same price movement for the year. Prices of cattle products, except mess beef, followed in a general way the prices of cattle. Prices of all of the hog products shared in the decline made in the price of hogs during the last two months of the year. Mutton reflects the decline in price of sheep, corn meal reflects the advance and decline of corn, but glucose continued to advance until the end of the year. Prices of wheat flour followed the price of wheat, but crackers and loaf bread remained the same. Cotton receded from the price shown during the summer, but the movement was not fully reflected in cotton goods, as several articles either advanced or remained the same during the year. Wool and woolen goods sustained a very steady price during the year, the principal variation being in women's dress goods (all wool). Leather and boots and shoes reflect but very slightly the heavy decline shown in the price of hides.

The lowest monthly relative price during 1907 for cattle was 109.2 in December, the highest 132.8 in July; the lowest for fresh beef was 103.8 in March, the highest 124.9 in August; the lowest for beef hams was 134.0 in January, the highest 160.3 in November; the lowest for mess beef was 110.7 in January, the highest 132.5 in December; the lowest for tallow was 126.0 in December, the highest 155.2 in March; the lowest for hides was 126.5 in December, the highest 173.6 in January. The facts for the other groups may be seen by reference to the table.

Table IV. - Average yearly actual and relative prices of commodities, 1890 to 1907, and base prices (average for 1890-1899), pages 427 to 453.—This table shows for each commodity the average price for each of the 18 years from 1890 to 1907. In the parallel column following is given the relative price for each year—that is, the per cent that the price in each year is of the average price for the 10 years from 1890 to 1899. In the line above the prices for 1890 are given the average prices for the 10-year period taken as the basis of comparison.

The average price for each year was obtained, as has been explained on page 310, by dividing the sum of the quotations for each year as shown in Table I by the number of quotations for each year. The average price for the 10-year period (1890 to 1899) was obtained by dividing the sum of the average prices of the 10 years by 10. The relative prices for each year were computed in the same way as for each month, as explained in the discussion of Table II.

Table V. - Yearly relative prices of commodities, 1890 to 1907, pages 454 to 471.—This table is taken from Table IV and shows the relative prices of each of the commodities included therein. In this table similar commodities have been grouped and the average of the relative prices shown for the commodities in each subgroup and in each of the 9 general groups. The averages in all cases were found by dividing the sum of the relative prices by the number of commodities in the group under consideration, as explained on page 328 in the discussion of Table III. The average relative price of each of the 9 general groups was found by dividing the sum of the relative prices of the different descriptions of commodities for each year by the number of these commodities or series of quotations considered in that year. The sum of the relative prices in 1890 of the commodities shown under the general group food, etc., for example, is 5,958.2, which amount, divided by 53, the number of different descriptions of commodities or series of quotations considered for that year, gives 112.4, the average for the group food, etc., for 1890. For 1893 to 1903, 54 commodities are quoted in this group, and that number is accordingly the divisor for each of those years. For 1904 to 1907, 53 commodities are included in this group.

The average relative price of each of the 9 general groups for each year of the period and the average relative price of all commodities for each year are shown on page 295.

The average relative prices of the 248 commodities for which quotations were secured for the entire period involved do not differ materially from the average relative price of all commodities shown in a preceding table based on the varying number of commodities in the different years. Eliminating the commodities for which quotations could be secured for only a portion of the period, we find that the average relative price of the 248 commodities remaining was 129.5 in 1907, exactly the same as the relative price for the 258 articles for which wholesale prices were secured in this investigation.

The following table shows for each of the 9 general groups the relative prices of 1907 compared with the average for 1890 to 1899.

There are included in this table only those commodities which have retained practically the same description throughout the 18-year period. The average price for 1890 to 1899 is in every case the base, or 100 per cent. It should be kept in mind in using the table that the comparison is between the average prices for 1907 and the average prices for the base period.

RELATIVE PRICES, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899

[For a more detailed description of the articles see Table 1, page 347 et seq. Average price for 1890-1899 = 100.0.]

Farm products, 16 articles.

Article.	Relative price, 1907.	Article.	Relative price, 1907.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Flaxseed: No. 1	106.1	Cotton: upland, middling	153.0
Wheat: contract grades, cash	120.8	Hides: green, salted, packers, heavy native steers	155.3
Cattle: steers, good to choice	122.8	Hay: timothy, No. 1	162.4
Cattle: steers, choice to extra	123.0	Oats: cash	167.4
Sheep: western	123.5	Barley: by sample	169.0
Sheep: native	130.3		
Hogs: heavy	137.8		
Corn: No. 2, cash	138.8	PRICE DECREASED.	
Hogs: light	140.6		
Rye: No. 2, cash	145.4	Hops: New York State, choice	98.1

Food, etc., 52 articles.

PRICE INCREASED.		PRICE INCREASED—continued.	
Bread: loaf (Washington market)	100.6	Meat: beef, salt, extra mess	122.5
Vegetables, fresh: onions	103.0	Fruit: apples, sun-dried	123.9
Flour: wheat, winter straights	103.7	Butter: creamery, extra (N. Y. market)	126.2
Beans: medium, choice	106.4	Butter: creamery, Elgin (Elgin market)	127.2
Fruit: raisins, California, London layer	108.4	Meal: corn, fine white	129.5
Starch: pure corn	109.5	Molasses: New Orleans, open kettle	129.7
Salt: American	112.6	Milk: fresh	131.4
Fish: salmon, canned	113.2	Butter: dairy, New York State	132.0
Flour: wheat, spring patents	113.5	Flour: buckwheat	132.4
Bread: loaf, Vienna (N. Y. market)	113.6	Meat: hams, smoked	132.4
Meat: beef, fresh, native sides	114.7	Spices: pepper, Singapore	132.7
Meat: mutton, dressed	116.0	Meal: corn, fine yellow	133.5
Vinegar: cider, Monarch	116.7	Bread: crackers, Boston	133.7
Bread: loaf, homemade (N. Y. market)	118.6		

RELATIVE PRICES, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

Food, etc., 52 articles—Concluded.

Article	Relative price, 1907.
PRICE INCREASED—concluded.	
Fish: cod, dry, bank, large	138.6
Flour: Rye	138.7
Meat: bacon, short rib sides	140.1
Lard: prime contract	140.7
Eggs: new-laid, fancy, near-by	141.2
Meat: bacon, short clear sides	141.3
Tallow	142.8
Cheese: New York, full cream	143.3
Meat: beef, salt, hams, western	144.0
Meat: pork, salt, mess, old to new	151.0
Fish: herring, shore, round	162.9
Fruit: currants, in barrels	187.5
PRICE DECREASED	
Fruit: apples, evaporated, choice	99.5
Fish: mackerel, salt, large No. 3s	98.5
Sugar: granulated	98.4
Vegetables, fresh: potatoes, white	98.4
Sugar: 96° centrifugal	97.0
Sugar: 89° fair refining	95.7
Rice: domestic, choice	95.2
Bread: crackers, soda	90.5
Tea: Formosa, fine	81.0
Fruit: prunes, California, in boxes	76.0
Soda: bicarbonate of, American	62.2
Coffee: Rio No. 7	50.1
Spices: nutmegs	32.3

Cloths and clothing, 58 articles.

Article	Relative price, 1907.
PRICE INCREASED.	
Overcoatings: chinchilla, cotton warp, C. C. grade	100.5
Linen shoe thread: 10s, Barbour	102.1
Sheetings: bleached, 10-4 Wamsutta S T	103.4
Linen thread: 3-cord, 200-yard spools, Barbour	107.3
Boots and shoes: men's vici kid shoes, Goodyear welt	108.7
Wool: Ohio, medium fleece (¼ and ⅜ grade), scoured	113.0
Leather: sole, oak	113.6
Underwear: shirts and drawers, white, all wool, full-fashioned, 18-gauge	115.8
Shirtings: bleached, 4-4, Wamsutta $\overset{0}{XX}$	116.0
Broadcloths: first quality, black, 54-inch, made from XXX wool	116.6
Leather: wax calf, 30 to 40 pounds to the dozen, B grade	117.1
Blankets: 11-4, 5 pounds to the pair, all wool	119.0
Overcoatings: chinchilla, B-rough, all wool	119.4
Ginghams: Lancaster	120.4
Carpets: ingrain, 2-ply, Lowell	121.2
Boots and shoes: women's solid grain shoes, leather, polish or polka	123.1
Flannels: white, 4-4, Ballard Vale No. 3	123.1
Ginghams: Amoskeag	123.5
Carpets: Wilton, 5-frame, Bigelow	123.7
Carpets: Brussels, 5-frame, Bigelow	124.7
Silk: raw, Japan, filatures	125.9
Suitings: indigo blue, all wool, 16-ounce	126.2
Women's dress goods: Franklin sackings, 6-4	126.8
Worsted yarns: 2-40s, Australian fine	127.3
Worsted yarns: 2-40s, XXXX or its equivalent in quality, white, in skeins	128.4
Boots and shoes: men's brogans, split	128.7
Suitings: indigo blue, all wool, 54-inch, 14-ounce, Middlesex standard	129.3
Tickings: Amoskeag, A. C. A	129.4
Wool: Ohio, fine fleece (X and XX grade), scoured	129.9
Blankets: 11-4, 5 pounds to the pair, cotton warp, all wool filling	130.5
PRICE INCREASED—concluded.	
Cotton yarns: carded, white, mule-spun, northern, cones, 22/1	130.6
Horse blankets: 6 pounds each, all wool	130.9
Silk: raw, Italian, classical	131.1
Denims: Amoskeag	132.3
Shirtings: bleached, Williamsville, A1	132.8
Sheetings: brown, 4-4, Indian Head	133.4
Cotton thread: 6 cord, 200-yard spools, J. & P. Coats	134.8
Women's dress goods: cashmere, all wool, 10-11 twill, 38-inch, Atlantic Mills J	134.9
Sheetings: brown, 4-4 Pepperell R	135.4
Leather: sole, hemlock, Buenos Aires and Montana, middle weights, first quality	136.4
Cotton yarns: carded, white, mule-spun, northern, cones, 10/1	137.1
Bags: 2-bushel, Amoskeag	138.5
Sheetings: brown, 4-4, Atlantic A	138.9
Cotton flannels: 3½ yards to the pound	139.1
Cotton flannels: 2¾ yards to the pound	139.9
Shirtings: bleached, 4-4, Lonsdale	141.0
Blankets: 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling	141.5
Shirtings: bleached, 4-4, Hope	143.7
Drillings: brown, Pepperell	144.2
Women's dress goods: cashmere, cotton warp, 9-twill, 4-4, Atlantic mills F	147.0
Drillings: 30-inch, Stark A	150.1
Sheetings: bleached, 10-4, Pepperell	153.0
Shirtings: bleached, 4-4, Fruit of the Loom	153.4
Boots and shoes: men's split boots	160.0
Print cloths: 28-inch, 64 by 64	167.4
PRICE DECREASED.	
Overcoatings: covert cloth, light weight, staple goods	96.9
Hosiery: men's cotton half hose, seamless, standard quality, 84 needles	95.6
Hosiery: women's cotton hose, seamless, fast black, 26 to 28 ounce, 160 to 176 needles	89.

Fuel and lighting, 13 articles.

Article	Relative price, 1907.
PRICE INCREASED.	
Coal: bituminous, Georges Creek (f. o. b. N. Y. Harbor)	118.0
Coal: anthracite, broken	124.9
Petroleum: refined, for export	127.0
Coal: anthracite, stove	127.1
Coal: bituminous, Pittsburg (Youghiogheny)	128.1
Coal: anthracite, chestnut	134.1
Coal: anthracite, egg	134.2
Petroleum: refined, 150° fire test, w. w.	151.2
PRICE INCREASED—concluded.	
Coke: Connellsville, furnace	166.3
Coal: bituminous, Georges Creek (at mine)	173.0
Petroleum: crude	190.5
PRICE DECREASED.	
Candles: adamantine, 6s, 14-ounce	94.8
Matches: parlor, domestic	85.4

RELATIVE PRICES, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Continued.

Metals and implements, 35 articles.

Article.	Relative price, 1907.	Article.	Relative price, 1907.
PRICE SAME AS BASE.		PRICE INCREASED—concluded.	
Saws: crosscut, Disston	100.0	Pig iron: foundry No. 1	161.4
Trowels: M. C. O., brick, 10½-inch	100.0	Copper wire: bare	164.1
		Pig iron: Bessemer	165.8
PRICE INCREASED.		Copper: sheet, hot-rolled (base sizes)	168.3
		Copper: ingot, lake	172.2
Saws: band, Disston, No. 7	101.3	Pig iron: foundry No. 2	182.9
Barb wire: galvanized	104.3	Pig iron: gray forge, southern coke	189.3
Steel rails	107.4	Tin: pig	211.1
Planes: Bailey, No. 5	115.7	Augers: extra, ¾-inch	223.9
Files: 8-inch mill bastard	117.0	Chisels: extra, socket firmer, 1-inch	234.3
Nails: cut, 8-penny, fence and common	118.3	Locks: common mortise	244.8
Butts: loose joint, cast, 3 by 3 inch	126.6	Doorknobs: steel, bronze-plated	265.2
Bar iron: best refined, from store (Philadelphia market)	128.7	PRICE DECREASED.	
Hammers: Maydole, No. 1½	129.0		
Steel billets	135.9	Shovels: Ames No. 2	99.7
Spelter: western	136.5	Nails: wire, 8-penny, fence and common	97.9
Lead pipe	139.2		
Zinc: sheet	140.9	Quicksilver	97.1
Axes: M. C. O., Yankee	141.9	Silver: bar, fine	88.1
Lead: pig	144.9	Wood screws: 1-inch, No. 10, flathead	80.7
Vises: solid box, 50-pound	147.2		

Lumber and building materials, 20 articles.

Article.	Relative price, 1907.	Article.	Relative price, 1907.
PRICE INCREASED.		PRICE INCREASED—concluded.	
Cement: Rosendale	107.1	Pine: yellow	165.2
Brick: common, domestic	110.7	Spruce	167.3
Lime: common	113.9	Poplar	185.2
Carbonate of lead: American, in oil	120.8	Hemlock	186.0
Maple: hard	121.7	Turpentine: spirits of	189.8
Window glass: American, single, thirds, 6 by 8 to 10 by 15 inch	123.2	Tar	193.3
		Resin: common to good, strained	304.0
Window glass: American, single, firsts, 6 by 8 to 10 by 15 inch	130.8	PRICE DECREASED.	
Oxide of zinc	134.5		
Oak: white, plain	147.5	Linseed oil: raw	95.7
Oak: white, quartered	149.0	Putty	75.9
Shingles: cypress	149.8		

Drugs and chemicals, 9 articles.

Article.	Relative price, 1907.	Article.	Relative price, 1907.
PRICE INCREASED.		PRICE DECREASED.	
Brimstone: crude, seconds	103.9	Glycerin: refined	98.9
Alum: lump	104.8	Quinine: American	72.2
Sulphuric acid: 66°	112.4	Alcohol: wood, refined, 95 per cent	41.8
Alcohol: grain	112.6		
Muriatic acid: 20°	129.8		
Opium: natural, in cases	209.6		

House furnishing goods, 14 articles.

Article.	Relative price, 1907.	Article.	Relative price, 1907.
PRICE SAME AS BASE.		PRICE INCREASED—concluded.	
Table cutlery: carvers, stag handles	100.0	Furniture: bedroom sets, ash	137.4
		Furniture: chairs, kitchen	151.4
PRICE INCREASED.		Wooden ware: pails, oak-grained	151.7
		Furniture: chairs, bedroom, maple	161.4
Earthenware: plates, white granite	102.4		
Earthenware: plates, cream-colored	106.6	PRICE DECREASED.	
Table cutlery: knives and forks, cocobolo handles	107.0	Earthenware: teacups and saucers, white granite	98.8
Wooden ware: tubs, oak-grained	118.8	Glassware: pitchers, ½-gallon, common	89.4
Furniture: tables, kitchen	124.7	Glassware: tumblers, ⅓-pint, common	84.5
Glassware: nappies, 4-inch	125.0		

RELATIVE PRICES, 1907, COMPARED WITH AVERAGE PRICE FOR 1890-1899—Concluded.

Miscellaneous, 12 articles.

Article.	Relative price, 1907	Article.	Relative price, 1907
PRICE INCREASED.		PRICE INCREASED—concluded.	
Proof spirits	114.2	Rope, manila	138.1
Starch, laundry	116.1	Malt, western made	147.2
Soap, castile, mottled, pure	117.9	Cotton-seed oil, summer yellow, prime	160.0
Tobacco, smoking, granulated, Seal of North Carolina	117.9	PRICE DECREASED.	
Tobacco, plug	118.6		
Cotton-seed meal	130.7	Paper, wrapping, manila	91.5
Rubber, Para Island	132.8	Paper, news	83.3

The 1907 prices of all of the 16 articles included in the farm products group, except hops, were higher than the average price for 1890 to 1899. The 1907 price, compared with the average price for 1890 to 1899, shows barley 69 per cent above; oats 67.4 per cent above; hay, 62.4 per cent above; hides, 55.3 per cent above; cotton, 53 per cent above, etc. The price of hops was only 1.9 per cent below the average price for 1890 to 1899.

Thirty-nine of the 52 articles of food shown in this table were higher and 13 lower in price than the average for 1890 to 1899. In 1907 the price of currants was 87.5 per cent above the average price for 1890 to 1899; herring, 62.9 per cent above; mess pork, 51 per cent above; beef hams, 44 per cent above; cheese, 43.3 per cent above; clear bacon, 41.3 per cent above; eggs, 41.2 per cent above, etc. The price of nutmegs was 67.7 per cent below the average price for 1890 to 1899; coffee, 49.9 per cent below; prunes, 23.4 per cent below; tea, 19 per cent below; granulated sugar, 1.6 per cent below, etc.

Of the 58 articles considered in the cloths and clothing group in 1907, the prices of 55 were above and 3 below the average price for 1890 to 1899. In 1907 the price of print cloths was 67.4 per cent above the average price for 1890 to 1899; men's split boots, 60 per cent above; Fruit of the Loom shirtings, 53.4 per cent above; Pepperell bleached sheetings, 53 per cent above; Stark A drillings, 50.1 per cent above, etc.

Of the 13 articles included in the fuel and lighting group in 1907, the prices of only the less important articles of matches and candles were below the average price for 1890 to 1899. The price of crude petroleum was 90.5 per cent above the average price for 1890 to 1899; Georges Creek coal at the mine, 73 per cent above; coke, 66.3 per cent above; refined petroleum, 51.2 per cent above, etc.

Thirty-five articles are considered in the metals and implements group. The prices of two articles in 1907 were the same as the average price for 1890 to 1899, while the prices of 28 articles were above and of 5 below the average price for 1890 to 1899. Doorknobs were 165.2 per cent above; locks, 144.8 per cent above; chisels, 134.3 per cent above; augers, 123.9 per cent above; pig tin, 111.1 per cent above; pig iron, gray forge, 89.3 per cent above, etc. The price of wood screws was 19.3 per cent below the average for 1890 to 1899; bar silver, 11.9 per cent below; wire nails, 2.1 per cent below, etc.

Of the 20 articles included in the lumber and building materials group, all but 2 showed prices above the average for 1890 to 1899. The price of resin was 204 per cent above the average price for 1890 to 1899; tar, 93.3 per cent above; spirits of turpentine, 89.8 per cent above; hemlock, 86 per cent above, etc. The price of putty was 24.1 per cent below the average for 1890 to 1899 and of linseed oil 4.3 per cent below.

Of the 9 articles included in the group of drugs and chemicals, 6 were above and 3 below the average price for 1896 to 1899.

Of the 14 articles considered in the group of house furnishing goods, the price of 1 in 1907 was the same as the average price for 1890 to 1899, while the prices of 10 were above and of 3 below the average price for 1890 to 1899.

Of the 12 articles included in the miscellaneous group, the 1907 prices of 10 were above and of 2 below the average price for 1890 to 1899.

The facts presented in the foregoing table are summarized in the following, which shows the changes in prices of articles in each group, classified by per cent of change:

CHANGES IN PRICES OF ARTICLES IN EACH GROUP, CLASSIFIED BY PER CENT OF CHANGE, 1907 COMPARED WITH AVERAGE PRICE FOR 1890-1899.

Group.	Number of articles	Price increased—					Price same as base	Price decreased—			
		100 per cent or more	50 or under 100 per cent	25 or under 50 per cent	10 or under 25 per cent	Less than 10 per cent		Less than 10 per cent	10 or under 25 per cent	25 or under 50 per cent.	50 per cent or more.
Farm products	16		5	5	4	1		1			
Food, etc	52		3	20	10	6		8	2	2	1
Cloths and clothing	58		5	30	15	5		2	1		
Fuel and lighting	13		4	5	2			1	1		
Metals and implements	35	5	7	10	3	3	2	3	2		
Lumber and building materials	20	1	6	5	5	1		1	1		
Drugs and chemicals	9	1		1	2	2		1		1	1
House furnishing goods	14		3	2	2	3	1	1	2		
Miscellaneous	12		1	4	5			1	1		
Total	229	7	34	82	48	21	3	19	10	3	2

It is seen in the above comparison of the prices of 1907 with the average for 1890 to 1899 that of the 16 articles in the farm products group, 15 show an increase and 1 a decrease; of the 52 in the food, etc., group, 39 show an increase and 13 a decrease; of the 58 in the cloths and clothing group, 55 show an increase and 3 show a decrease; of the 13 in the fuel and lighting group, 11 show an increase and 2 show a decrease; of the 35 in the metal and implements group, 28 show an increase, 2 show the same price as the average for the base period, and 5 show a decrease; of the 20 in the lumber and building materials group, 18 show an increase and 2 a decrease; of the 9 in the drugs and chemicals group, 6 show an increase and 3 a decrease; of the 14 in the house furnishing goods group, 10 show an increase, 1 shows the same price as the average for the base period, and 3 a decrease; of the 12 in the miscellaneous group, 10 show an increase and 2 a decrease. Of the 229 commodities included in this table, 192 show an increase, 3 show the same price as the average for the base period, and 34 show a decrease.

The number of articles according to classified per cents of increase and decrease is also shown in the following table. Of the 192 commodities that showed an increase in 1907 over the average for 1890 to 1899, 21 advanced less than 10 per cent, 48 advanced 10 or under 25 per cent, 82 advanced 25 or under 50 per cent, 34 advanced 50 or under 100 per cent, and 7 advanced 100 per cent or more. Of the 34 commodities which showed a decrease, 19 decreased less than 10 per cent, 10 decreased 10 or under 25 per cent, 3 decreased 25 or under 50 per cent, and 2 decreased 50 per cent or more.

The number and per cent of articles which showed each specified increase or decrease are given in the following table:

NUMBER AND PER CENT OF ARTICLES, BY CLASSIFIED PER CENT OF INCREASE OR DECREASE, 1907 COMPARED WITH AVERAGE PRICE FOR 1890-1899.

	Number of articles	Per cent of articles.		Number of articles.	Per cent of articles.
Price increased:			Price decreased:		
100 per cent or more	7	3.0	Less than 10 per cent	19	8.3
50 or under 100 per cent	34	14.8	10 or under 25 per cent	10	4.4
25 or under 50 per cent	82	35.8	25 or under 50 per cent	3	1.3
10 or under 25 per cent	48	21.0	50 per cent or more	2	.9
Less than 10 per cent	21	9.2			
Total	192	83.8	Total	34	14.9
Price same as base	3	1.3	Grand total	229	100.0

Of the 229 articles included in this table, it is seen that 192, or 83.8 per cent, show an increase in price; 3 articles, or 1.3 per cent, show the same price as the average for the base period, and 34 articles, or 14.9 per cent, show a decrease in price in 1907 as compared with the average price for the base period.

Of the 258 commodities considered in the compilation of prices for 1907, the average price for 172 commodities was higher in 1907 than in 1906, the average price of 35 was the same in 1907 as in 1906, and the average price of 51 was lower in 1907 than in 1906.

The following table shows the relative prices of certain related articles, so grouped as to render easy a comparison of the course of these prices during the years from 1890 to 1907:

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1907.

[Average price for 1890-1899=100.0.]

Year.	Cattle and cattle products.						Dairy products.		
	Cattle.	Beef, fresh.	Beef, hams.	Beef, mess.	Tallow.	Hides	Milk.	Butter.	Cheese.
1890	89.5	89.2	80.4	86.8	105.7	99.6	103.1	100.4	97.1
1891	109.2	106.2	85.8	108.4	111.0	101.5	104.7	116.1	102.4
1892	95.4	98.8	89.5	84.8	106.4	92.8	105.1	116.4	107.2
1893	103.0	105.4	98.6	102.2	125.1	79.9	109.4	121.3	109.0
1894	96.3	97.0	101.5	101.0	110.3	68.4	103.1	102.2	107.4
1895	103.7	102.7	95.9	101.4	99.8	109.7	99.2	94.5	94.1
1896	88.3	90.5	88.1	93.7	78.9	86.6	91.8	82.3	92.0
1897	99.5	99.7	125.1	95.7	76.3	106.3	92.2	84.1	98.1
1898	102.2	101.3	118.8	114.2	81.8	122.8	93.7	86.8	83.3
1899	113.2	108.3	125.6	115.9	104.1	131.8	99.2	95.8	108.9
1900	111.3	104.3	114.2	121.7	111.5	127.4	107.5	101.7	114.3
1901	116.6	102.1	112.6	116.3	119.1	132.0	102.7	97.7	102.4
1902	139.5	125.9	118.0	147.1	141.6	142.8	112.9	112.1	114.1
1903	105.8	101.7	117.2	113.1	117.2	124.8	112.9	105.7	123.3
1904	110.9	106.1	123.5	109.4	105.5	124.4	107.8	98.4	103.2
1905	111.2	104.0	121.6	125.0	103.2	152.6	113.3	112.8	122.8
1906	114.2	101.2	119.2	110.3	119.3	164.7	118.0	113.1	133.0
1907	122.9	114.7	144.0	122.5	142.8	155.3	131.4	128.5	143.3

Year.	Hogs and hog products.					Sheep and sheep products.		
	Hogs	Bacon	Hams, smoked.	Mess pork.	Lard.	Sheep.	Mutton.	Wool.
1890	89.2	89.3	101.1	104.4	96.8	119.3	123.7	132.1
1891	99.2	103.7	99.8	97.2	100.9	117.8	114.9	125.8
1892	115.7	116.6	109.3	99.1	117.9	125.2	121.2	113.2
1893	148.6	154.7	126.9	157.6	157.5	103.8	106.5	101.6
1894	112.2	111.8	103.6	121.4	118.2	73.6	80.2	79.1
1895	96.6	96.3	96.2	101.7	99.8	78.4	82.2	70.1
1896	78.3	73.1	95.8	76.8	71.7	78.7	82.9	70.6
1897	82.8	79.9	90.9	76.6	67.4	94.2	96.6	88.7
1898	85.6	89.4	82.0	84.8	84.4	104.9	98.0	108.3
1899	91.8	85.8	93.8	80.3	85.0	104.3	94.3	110.8
1900	115.5	111.5	104.2	107.5	105.5	112.0	96.4	117.7
1901	134.5	132.3	109.2	134.2	135.3	92.0	89.5	96.6
1902	155.2	159.3	123.1	154.2	161.9	103.2	97.9	100.8
1903	137.2	142.6	129.2	143.1	134.1	98.4	98.7	110.3
1904	116.7	115.1	108.9	120.6	111.8	109.1	103.2	115.5
1905	120.2	119.0	106.3	123.9	113.9	131.5	113.9	127.3
1906	142.2	139.9	125.5	150.5	135.6	132.6	120.7	121.1
1907	130.2	140.7	132.4	151.0	140.7	126.9	116.0	121.5

Year.	Corn, etc.			Flaxseed, etc		Rye and rye flour.		Wheat and wheat flour.		Flour, etc.		
	Corn.	Glucose [a]	Meal.	Flaxseed.	Linseed oil.	Rye.	Rye flour.	Wheat	Wheat flour.	Wheat flour.	Crackers.	Loaf bread.
1890	103.8	......	100.8	125.5	135.8	103.0	101.4	118.9	120.9	120.9	107.7	100.9
1891	151.0	......	142.0	97.1	106.8	157.6	148.3	128.1	125.6	125.6	107.7	100.9
1892	118.3	......	114.0	91.4	90.0	127.7	121.1	104.9	104.2	104.2	104.3	100.9
1893	104.2	124.3	105.8	97.7	102.2	92.6	98.0	90.1	89.3	89.3	100.6	100.9
1894	113.7	111.4	105.6	121.6	115.6	88.1	83.8	74.4	77.6	77.6	98.8	100.9
1895	104.0	109.2	103.3	111.8	115.6	91.2	94.5	79.9	84.4	84.4	95.6	98.7
1896	67.8	81.7	77.4	72.9	81.2	66.5	80.9	85.4	91.2	91.2	94.1	94.5
1897	66.9	86.0	76.5	78.1	72.2	74.9	84.6	105.8	110.1	110.1	85.3	100.9
1898	82.6	91.8	83.7	99.8	86.5	93.8	92.9	117.8	109.0	109.0	107.3	100.9
1899	87.6	95.6	91.2	104.0	94.1	104.4	99.4	94.7	87.9	87.9	99.1	100.9
1900	100.2	104.9	97.0	145.7	138.7	97.9	103.3	93.7	88.3	88.3	102.7	100.9
1901	130.6	116.0	115.5	145.8	140.0	100.8	100.1	95.7	87.4	87.4	108.2	100.9
1902	156.9	153.6	148.2	135.0	130.8	102.5	103.8	98.7	89.7	89.7	108.2	100.9
1903	121.1	120.7	124.7	94.1	91.9	97.5	94.9	105.1	97.1	97.1	101.3	100.9
1904	132.6	126.3	129.5	99.6	91.7	133.4	131.1	138.3	125.4	125.4	103.4	106.0
1905	131.7	125.1	128.4	107.6	103.1	134.5	134.7	134.5	122.3	122.3	113.8	110.9
1906	121.8	142.9	122.5	99.1	89.3	115.5	115.9	105.6	96.8	96.8	112.1	110.9
1907	138.8	150.4	131.5	106.1	95.7	145.4	138.7	120.8	108.6	108.6	112.1	110.9

[a] Average for 1893-1899=100.

RELATIVE PRICES OF CERTAIN GROUPS OF RELATED ARTICLES, 1890 TO 1907—Concluded.

[Average price for 1890-1899=100.0.]

Year.	Cotton and cotton goods.									
	Cotton upland, middling.	Bags 2-bushel, Amoskeag.	Calico.	Cotton flannels.	Cotton thread.	Cotton yarns.	Denims.	Drillings.	Ginghams.	Hosiery.
1890....	142.9	113.9	117.5	121.8	101.6	111.7	112.5	121.1	119.1	129.7
1891....	110.8	111.7	104.0	121.8	100.7	112.8	109.6	114.6	122.1	122.8
1892....	99.0	110.8	117.5	115.9	100.7	117.0	109.6	102.2	122.1	117.4
1893....	107.2	106.8	113.0	101.4	100.7	110.5	112.5	105.6	114.9	109.4
1894....	90.2	91.1	99.5	95.7	100.7	93.0	105.4	97.1	89.5	100.8
1895....	94.0	82.2	94.9	91.7	100.7	92.1	94.6	93.2	87.0	94.4
1896....	102.0	91.6	94.9	93.9	99.6	93.0	94.6	100.2	88.0	90.5
1897....	92.2	92.9	90.4	88.6	98.4	90.6	89.2	90.4	84.2	86.7
1898....	76.9	95.6	81.4	81.0	98.4	90.8	85.9	86.8	83.1	83.4
1899....	84.7	103.4	87.3	88.0	98.4	88.5	85.8	88.5	89.7	82.5
1900....	123.8	112.6	94.9	101.6	120.1	115.5	102.8	105.0	96.3	87.3
1901....	111.1	101.0	90.4	95.4	120.1	98.3	100.2	102.2	92.3	85.9
1902....	115.1	102.4	90.4	96.1	120.1	94.0	100.6	102.0	99.2	85.2
1903....	144.7	104.2	91.1	106.8	120.1	112.9	108.0	109.9	101.8	90.1
1904....	155.9	128.4	95.7	125.6	120.1	119.5	116.6	126.7	99.9	89.2
1905....	123.1	109.6	93.5	119.7	120.1	105.7	103.7	123.8	93.4	87.5
1906....	142.0	129.1	99.5	128.2	120.1	120.8	118.1	138.8	104.7	89.7
1907....	153.0	138.5	121.0	130.5	134.8	133.9	132.3	147.2	122.0	97.4

Year.	Cotton and cotton goods.				Wool and woolen goods.					
	Print cloths.	Sheetings.	Shirtings.	Tickings.	Wool.	Blankets (all wool).	Broadcloths.	Carpets.	Flannels.	Horse blankets.
1890....	117.7	117.6	112.9	113.1	132.1	108.3	113.7	105.3	116.8	109.1
1891....	103.5	112.3	110.2	110.7	125.8	106.0	113.7	112.8	116.8	104.7
1892....	119.3	103.8	107.4	108.4	113.2	107.1	113.7	104.5	115.9	109.1
1893....	114.6	107.7	110.2	111.3	101.6	107.1	113.7	104.5	109.5	104.7
1894....	96.8	95.9	99.9	102.2	79.1	101.2	91.2	98.7	94.1	96.0
1895....	100.9	94.6	97.6	94.8	70.1	89.3	79.7	91.0	81.7	92.5
1896....	90.9	97.4	97.9	96.0	70.6	89.3	79.7	90.2	85.4	90.8
1897....	87.6	91.8	92.0	91.9	88.7	89.3	98.2	93.5	82.6	99.5
1898....	72.6	86.7	83.8	84.3	108.3	107.1	98.2	100.2	97.8	99.5
1899....	96.3	92.2	87.8	87.0	110.8	95.2	98.2	99.4	99.5	94.2
1900....	108.6	105.9	100.4	102.2	117.7	107.1	108.0	102.7	108.7	118.7
1901....	99.3	101.8	98.9	95.5	96.6	101.2	110.3	101.9	100.8	109.9
1902....	108.9	101.4	98.8	99.0	100.8	101.2	110.3	102.5	105.8	109.9
1903....	113.3	110.6	103.2	104.1	110.3	110.1	110.3	108.6	114.3	117.8
1904....	117.3	121.1	104.7	114.3	115.5	110.1	110.5	110.0	117.6	122.2
1905....	110.0	113.5	101.2	102.1	127.3	119.0	115.2	115.7	118.4	130.9
1906....	127.7	122.1	111.1	119.0	121.1	122.0	116.6	117.7	122.4	135.3
1907....	167.4	132.2	137.4	129.4	121.5	119.0	116.6	123.2	123.1	130.9

Year.	Wool and woolen goods.						Hides, leather, and boots and shoes.			Petroleum.	
	Overcoatings (all wool).	Shawls.	Suitings.	Underwear (all wool).	Women's dress goods (all wool).	Worsted yarns.	Hides.	Leather.	Boots and shoes.	Crude.	Refined.
1890....	111.9	107.0	113.1	106.2	117.6	122.3	99.6	100.6	104.8	95.4	112.4
1891....	111.9	107.0	113.1	110.0	123.0	123.4	101.5	100.9	103.5	73.6	102.2
1892....	111.9	107.0	113.4	110.0	124.1	117.2	92.8	97.0	102.7	61.1	91.5
1893....	108.6	107.0	112.7	110.0	114.7	109.5	79.9	96.9	100.9	70.3	81.0
1894....	97.5	107.0	98.3	92.7	90.6	91.3	68.4	91.5	99.4	92.2	80.5
1895....	90.8	107.0	89.2	92.7	82.7	74.0	109.7	108.0	98.7	149.2	106.6
1896....	86.7	89.1	87.8	92.7	74.1	72.9	86.6	95.2	99.6	129.5	112.5
1897....	87.8	89.5	88.7	92.7	82.2	82.5	106.3	96.1	97.2	86.5	95.6
1898....	97.1	90.2	103.4	92.7	88.5	100.5	122.8	104.4	96.3	100.2	99.5
1899....	100.6	89.1	106.1	100.4	102.7	106.7	131.8	109.3	96.8	142.1	118.0
1900....	116.1	107.0	115.8	100.4	118.7	118.4	127.4	113.2	99.4	148.5	132.6
1901....	105.3	107.0	104.9	100.4	107.9	102.2	132.0	110.8	99.2	132.9	119.3
1902....	105.3	107.0	105.8	100.4	109.8	111.7	142.8	112.7	98.0	135.9	118.8
1903....	110.2	107.0	109.0	100.4	114.4	118.0	124.8	112.0	100.2	174.5	142.8
1904....	110.3	107.0	109.0	100.4	115.6	116.5	124.4	108.5	101.1	178.8	140.5
1905....	118.2	117.5	122.7	100.4	129.7	124.7	152.6	112.1	107.4	152.1	126.6
1906....	126.1	128.5	134.8	115.8	134.1	128.5	164.7	120.4	121.8	175.5	131.8
1907....	124.8	107.0	133.1	115.8	130.9	127.9	155.3	124.0	125.9	190.5	139.1

This table shows for all of the 6 articles grouped under cattle and cattle products (cattle, fresh beef, beef hams, mess beef, tallow, and hides) an advance in price in 1891, but not in the same degree; in 1892, a decline in all of the articles in this group; in 1893, an increase except for hides, for which there was a further decline; in 1894, a decline, except for beef hams, which increased; in 1895, an increase, except for beef hams and tallow; in 1896, a decline in all of the articles; in 1897, an increase, except for tallow; in 1898, an increase for all of the articles, except beef hams; in 1899, an increase for all; in 1900, a decline, except for mess beef and tallow; in 1901, an increase for cattle, tallow, and hides, and a decline for fresh beef, beef hams, and mess beef; in 1902, an increase for all; in 1903, a decrease for all; in 1904, an increase for cattle, fresh beef, and hams, and a decrease for mess beef, tallow, and hides; in 1905, an increase for cattle, mess beef, and hides, and a decrease for fresh beef, beef hams, and tallow; in 1906, an increase for cattle, hides, and tallow, and a decrease for fresh beef, beef hams, and mess beef; in 1907, an increase for all except hides, which decreased.

For the 18 years from 1890 to 1907 the lowest relative price for cattle was 88.3 in 1896, the highest 139.5 in 1902; the lowest for fresh beef 89.2 in 1890, the highest 125.9 in 1902; the lowest for beef hams 80.4 in 1890, the highest 114 in 1907; the lowest for mess beef 84.8 in 1892, the highest 147.1 in 1902; the lowest for tallow 76.3 in 1897, the highest 144.6 in 1902; the lowest for hides 68.4 in 1894, the highest 164.7 in 1906. The facts for the other groups may be seen by reference to the table.

General Tables I, II, III, IV, and V follow.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907.

[For explanation and discussion of this table, see pages 306 to 325.]

FARM PRODUCTS.

BARLEY: Choice to fancy malting, by sample.

[Price per bushel, in Chicago, weekly range; quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.51-$0.55	Apr....	$0.67-$0.70	July...	$0.73-$0.75	Oct.....	$1.00-$1.05
	.51- .55		.69- .71		.63- .66		1.01- 1.08
	.53- .57		.70- .73		.63		1.05- 1.10
	.55- .57		.71½- .74		.61- .66		.88- 1.08
Feb.....	.55- .58	May...	.73- .75	Aug....	.61- .65	Nov....	.77- .92
	.57- .60		.74- .80		.65- .69		.78- .95
	.59- .61		.81- .85		.67- .70		.86- .90
	.60- .63		.77- .84		.68- .75		.85- .90
			.72- .78		.71- .87		.86- .90
Mar.....	.62½- .65	June...	.72- .76	Sept...	.83- .90	Dec.....	.94- .98
	.65- .73		.75- .76		.89- .91		.97- 1.02
	.73- .75		.74- .75		.89- .94		.97- .98
	.68- .73		.73- .75		.91- 1.00		.94- .95
	.68- .72						
						Average.	$0.7663

CATTLE: Steers, choice to fancy.

[Price per hundred pounds, in Chicago, on Wednesday of each week; quotations from the Chicago Daily Drovers' Journal.]

Jan.....	$6.25-$7.20	Apr...	$6.10-$6.75	July	$6.75-$7.25	Oct...	$6.40-$7.30
	6.25- 7.15		6.05- 6.75		6.80- 7.30		6.15- 7.20
	6.10- 7.00		6.10- 6.75		6.75- 7.25		6.30- 7.40
	6.15- 7.00		6.05- 6.65		6.70- 7.35		6.15- 6.90
Feb.....	6.30- 7.00	May...	5.85- 6.40	Aug....	6.70- 7.50	Nov.....	6.20- 7.00
	6.30- 7.25		5.90- 6.50		6.50- 7.50		6.10- 7.00
	6.10- 7.00		5.75- 6.50		6.50- 7.45		5.75- 6.25
	6.10- 6.90		5.75- 6.50		6.50- 7.40		5.75- 6.65
			6.00- 6.50		6.60- 7.30		5.40- 6.50
Mar.....	6.00- 6.90	June...	6.55- 6.70	Sept..	6.35- 7.25	Dec.....	5.70- 6.35
	6.15- 6.90		6.50- 6.90		6.40- 7.35		5.35- 6.00
	6.10- 6.75		6.60- 7.00		6.00- 7.05		5.45- 6.30
	6.00- 6.85		6.60- 7.10		6.35- 7.25		5.40- 6.15
	6.10- 6.80						
						Average.	$6.5442

CATTLE: Steers, good to choice.

[Price per hundred pounds, in Chicago, on Wednesday of each week; quotations from the Chicago Daily Drovers' Journal.]

Jan....	$5.10-$6.15	Apr....	$5.65-$6.00	July..	$6.00-$6.70	Oct.....	$5.65-$6.35
	5.40- 6.10		5.65- 6.00		6.00- 6.75		5.45- 6.10
	5.35- 6.00		5.75- 6.05		5.90- 6.65		5.60- 6.25
	5.40- 6.10		5.60- 6.00		6.00- 6.60		5.15- 6.10
Feb...	5.65- 6.25	May...	5.50- 5.80	Aug....	5.90- 6.60	Nov.....	5.20- 6.15
	5.65- 6.75		5.60- 5.85		5.75- 6.45		5.15- 6.00
	5.50- 6.00		5.45- 5.70		5.85- 6.45		5.00- 5.65
	5.50- 6.00		5.40- 5.70		5.85- 6.45		5.00- 5.70
			5.60- 5.95		6.00- 6.50		4.90- 5.25
Mar.....	5.40- 5.90	June...	6.00- 6.50	Sept..	5.65- 6.30	Dec...	5.15- 5.65
	5.60- 6.10		5.95- 6.45		5.60- 6.25		4.70- 5.25
	5.50- 6.00		6.00- 6.50		5.40- 6.00		4.85- 5.40
	5.35- 5.90		5.85- 6.40		5.65- 6.30		4.85- 5.30
	5.55- 6.00						
						Average.	$5.8120

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FARM PRODUCTS—Continued.

CORN: No. 2, cash.

[Price per bushel, in Chicago, on Tuesday of each week; quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.39¾-$0.40	Apr....	$0.44¼-$0.44½	July....	$0.54½	Oct.....	$0.62 -$0.62¼
	.39¾		.45½- .45¾		$0.54¼- .54¾		.63¼- .64
	.40¼		.46¼- .46½		.53½- .53¾		.66¼- .66½
	.42¼		.47¼		.53½		.60¼- .61
	.43		.49¼		.54 - .54¼		.55¼- .56
Feb....	.43¼	May....	.50¼	Aug....	.55¼- .55½	Nov.....	.60½
	.43¾		.52¼		.54½		.58½- .59
	.43		.56		.56¼- .56½		.58 - .58½
	.43¼		.51 - .54¼		.59½- .60		.56½- .57
Mar....	.43¼	June....	.54½	Sept....	.61 - .61¼	Dec....	.59 - .59½
	.44¾		.53		.62½- .63		.58 - .58½
	.42½		.52¼- .53		.60½- .60¾		.60½- .61
	.44		.52¼- .53		.62		.58½- .59
	....		....		....		.59 - .59½
						Average.	$0.5280

COTTON: Upland, middling.

[Price per pound, in New York, on Tuesday of each week; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.1075	Apr....	$0.1090	July....	$0.1370	Oct....	$0.1180
	.1085		.1100		.1345		.1185
	.1080		.1115		.1285		.1175
	.1080		.1115		.1310		.1145
	.1100		.1145		.1290		.1080
Feb....	.1100	May....	.1175	Aug....	.1325	Nov.....	.1110
	.1105		.1205		.1330		.1080
	.1100		.1205		.1325		.1080
	.1105		.1225		.1355		.1140
Mar....	.1135	June....	.1290	Sept....	.1355	Dec....	.1170
	.1135		.1325		.1305		.1185
	.1100		.1295		.1225		.1190
	.1095		.1310		.1190		.1170
	....		....		....		.1180
						Average.	$0.1179

FLAXSEED: No. 1.

[Price per bushel, in Chicago, on the first of each month; quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$1.11½-$1.18½	Apr....	$1.13 -$1.20	July....	$1.25 -$1.25½	Oct....	$1.15 -$1.25
Feb....	1.16 - 1.23	May....	1.14 - 1.21	Aug....	1.14½- 1.15	Nov.....	1.08 - 1.18
Mar.....	1.17 - 1.24	June.	1.31½- 1.32	Sept....	1.12½- 1.22½	Dec.....	.99½- 1.10
						Average.	$1.1808

HAY: Timothy, No. 1.

[Price per ton, in Chicago, on Tuesday of each week; quotations from the Daily Inter-Ocean.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$15.50-$16.50	Apr....	$15.00-$16.00	July....	$18.50-$19.00	Oct....	$15.00-$16.00
	15.00- 16.00		15.00- 16.00		17.50- 18.50		15.00- 16.50
	15.00- 16.00		16.00- 17.00		18.00- 19.50		16.50- 17.50
	14.50- 15.50		16.50- 17.50		17.50- 19.00		18.00- 19.00
	15.00- 16.00		17.00- 18.00		17.50- 19.00		16.00- 17.00
Feb..	15.00- 16.00	May....	15.50- 16.50	Aug....	18.50- 19.50	Nov.....	15.50- 17.00
	16.00- 17.00		17.00- 18.00		18.50- 19.50		14.50- 15.50
	16.00- 17.00		18.00- 19.00		18.50- 19.50		14.50- 15.50
	16.00- 17.00		18.00- 19.00		18.50- 19.50		14.50- 15.50
Mar....	16.00- 17.00	June.	19.00- 20.50	Sept....	18.50- 19.50	Dec.	16.50- 17.50
	16.00- 17.00		20.50- 21.50		17.50- 18.50		16.50- 17.50
	15.00- 16.00		19.50- 20.50		15.50- 16.50		15.00- 16.50
	15.00- 16.00		18.50- 20.00		15.00- 15.50		14.00- 15.50
	....		....		....		13.00- 14.00
						Average.	$16.9387

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FARM PRODUCTS—Continued.

HIDES: Green, salted, packers, heavy native steers.

[Average monthly price per pound, in Chicago, quotations from the Shoe and Leather Reporter.]

Month	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.1627	Apr..	$0.1441	July...	$0.1472	Oct....	$0.1470
Feb....	.1620	May...	.1447	Aug...	.1411	Nov....	.1364
Mar..	.1531	June.	.1488	Sept...	.1411	Dec. ..	.1185
						Average.	$0.1455

HOGS: Heavy.

[Price per hundred pounds, in Chicago, on Tuesday of each week, quotations from the Daily Inter-Ocean.]

Jan...	$6.30-$6.45	Apr..	$6.70-$6.80	July...	$5.70-$6.15	Oct...	$5.95-$6.65
	6.40- 6.55		6.50- 6.67½		5.40- 5.95		6.05- 6.75
	6.50- 6.65		6.55- 6.77½		5.55- 5.90		6.25- 6.70
	6.60- 6.72½		6.55- 6.70		5.80- 6.10		5.85- 6.45
	6.80- 6.95		6.40- 6.57½		5.95- 6.37½		5.50- 6.20
Feb.	6.85- 7.05	May..	6.30- 6.47½	Aug...	5.75- 6.20	Nov....	5.45- 6.00
	7.05- 7.20		6.30- 6.50		5.80- 6.30		5.00- 5.50
	6.90- 7.07½		6.30- 6.50		5.55- 6.00		4.75- 5.15
	7.00- 7.12½		6.05- 6.20		5.90- 6.35		4.00- 4.30
Mar.	6.85- 7.00	June.	6.15- 6.30	Sept...	5.60- 6.05	Dec.	4.80- 5.15
	6.80- 6.97½		6.05- 6.20		5.80- 6.30		4.20- 4.55
	6.50- 6.75		6.00- 6.22½		5.75- 6.20		4.45- 4.90
	6.05- 6.25		5.75- 5.97½		5.85- 6.40		4.50- 4.85
							4.45- 4.65
						Average.	$6.0795

HOGS: Light.

[Price per hundred pounds, in Chicago, on Tuesday of each week, quotations from the Daily Inter-Ocean.]

Jan....	$6.30-$6.45	Apr..	$6.65-$6.82½	July...	$6.10-$6.30	Oct.....	$6.30-$6.70
	6.35- 6.55		6.55- 6.70		6.00- 6.15		6.65- 6.90
	6.45- 6.65		6.65- 6.80		5.90- 6.10		6.45- 6.70
	6.55- 6.72½		6.60- 6.75		6.10- 6.30		6.15- 6.50
	6.80- 6.95		6.50- 6.65		6.40- 6.65		5.85- 6.27½
Feb.....	6.85- 7.02½	May..	6.40- 6.55	Aug...	6.15- 6.40	Nov...	5.55- 6.15
	7.00- 7.20		6.45- 6.60		6.40- 6.65		5.00- 5.45
	6.80- 7.05		6.50- 6.62½		6.05- 6.30		4.85- 5.20
	6.90- 7.10		6.20- 6.30		6.35- 6.65		3.95- 4.32½
Mar...	6.85- 7.00	June.	6.25- 6.35	Sept...	6.05- 6.55	Dec.....	4.85- 5.15
	6.85- 7.00		6.17½- 6.30		6.25- 6.60		4.25- 4.65
	6.70- 6.80		6.15- 6.30		6.25- 6.60		4.55- 4.85
	6.15- 6.30		5.92½- 6.12½		6.37- 6.60		4.50- 4.80
							4.30- 4.65
						Average.	$6.2163

HOPS: New York State, choice.

[Price per pound, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$0.21-$0.23	Apr....	$0.19-$0.20	July.	$0.15-$0.16	Oct.....	$0.12-$0.14
Feb...	.21- .23	May..	.15- .16	Aug...	.15- .16	Nov....	.16- .18
Mar..	.21- .23	June.	.15- .16	Sept...	.14- .15	Dec....	.16- .17
						Average.	$0.1738

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FARM PRODUCTS—Continued.

OATS: Contract grades, cash.

[Price per bushel, in Chicago, on Tuesday of each week; quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.	$0.31	Apr.	$0.41¼	July	$0.41½	Oct.	$0.51⅜
	.33¾		.42¼		.43¼		.52¾
	.34⅜		.43¼		.43¼		.54⅛
	.35¼		.43¼		.43¾		.54¼
	.36¼		.45½		$0.4[illegible]-.46		.45
Feb.	.37⅜	May	.44¼	Aug.	.48½	Nov.	.49
	.38¼		.45¼		(a)		.45⅜
	$0.38¼-.40		$0.47½-.48		.46-.47⅞		.46⅛
	.41¼		.47¼		.51		.46⅜
Mar.	.40¼	June	.49	Sept.	.54½	Dec.	(a)
	.40⅞		.42½		.52½-.55⅛		.50
	.41		.44⅞		.53¼		.50½
	.41¼		.43		.51¼-.52¼		.48⅞
							.49⅜
						Average	$0.4701

RYE: No. 2, cash.

[Price per bushel, in Chicago, on Tuesday of each week; quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.	$0.62	Apr.	$0.67-$0.69½	July	$0.84½-$0.85	Oct.	$0.86-$0.88
	.60		.67-.69½		.83-.85½		.87½-.88
	.62		.68-.70		.85-.87		.89-.90
	.62		.69-.71		.85-.87		.84-.86
	.63		.69-.71		.85-.87		.72-.74
Feb.	$0.65-.70	May	.71-.74	Aug.	.76-.85	Nov.	.78
	.66-.69		.78-.81		.72-.75		.78-.80
	.64-.68		.80-.83		.75-.76		.79-.80
	.66-.68½		.84-.85		.81		.77-.78
Mar.	.64-.66	June	.85-.87	Sept.	.85-.86	Dec.	.78-.80
	.68-.70		.86-.88		.86-.87		.76½-.77
	.66-.69		.86-.88		.90-.90½		.75-.79
	.67-.69		.86-.88		.90-.90½		.79½
							.80
						Average.	$0.7688

SHEEP: Native.

[Price per hundred pounds, in Chicago, on Tuesday of each week; quotations from the Daily Inter-Ocean.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.	$4.00-$6.00	Apr.	$4.40-$6.50	July	$4.25-$5.85	Oct.	$4.25-$5.50
	4.00-5.75		4.75-6.85		4.50-6.00		4.25-5.90
	4.00-6.00		5.00-7.25		4.50-6.10		4.00-5.75
	4.60-5.85		4.50-6.25		4.25-6.00		4.00-5.75
	4.00-5.85		4.50-6.15		4.00-5.70		2.75-5.25
Feb.	4.00-6.00	May	4.50-6.25	Aug.	4.50-6.00	Nov.	2.00-5.35
	4.25-6.00		4.50-6.10		4.25-6.00		1.50-5.00
	4.25-6.00		4.75-6.25		4.25-5.75		1.75-5.15
	4.25-6.00		4.75-6.50		4.25-5.50		1.75-5.00
Mar.	4.25-6.25	June	3.75-7.00	Sept.	4.25-6.75	Dec.	2.00-4.50
	4.25-6.25		4.50-6.75		4.25-5.85		2.00-4.75
	4.40-6.40		4.75-6.25		4.25-6.00		2.00-4.40
	4.40-6.50		4.50-6.25		4.25-5.65		1.75-4.60
							2.50-5.30
						Average.	$4.8962

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a No quotation for week.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FARM PRODUCTS—Concluded.

SHEEP: Western.

[Price per hundred pounds, in Chicago, on Tuesday of each week, quotations from the Daily Inter-Ocean.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan. .	$4.00-$6.00	Apr. . .	$4.40-$6.50	July . . .	$4.25-$5.85	Oct	$4.25-$5.85
	4.00- 5.65		4.75- 6.85		4.50- 6.00		4.25- 5.90
	4.00- 5.80		5.00- 7.35		4.50- 6.10		4.00- 5.75
	4.60- 5.75		4.50- 6.15		4.25- 6.00		4.00- 5.75
	4.00- 5.75		4.50- 6.15		4.00- 5.50		2.75- 5.25
Feb. . .	4.00- 5.75	May .	4.50- 6.15	Aug . . .	4.50- 6.00	Nov .	2.00- 5.35
	4.25- 5.75		4.50- 6.10		4.25- 6.00		1.50- 5.00
	4.25- 5.75		4.75- 6.25		4.25- 5.75		1.75- 5.15
	4.25- 6.00		4.75- 6.50		4.25- 5.75		1.75- 5.00
Mar	4.00- 6.00	June.	3.75- 7.00	Sept . . .	4.25- 6.75	Dec . .	2.00- 4.90
	4.25- 6.15		4.50- 6.75		4.25- 5.85		2.00- 4.75
	4.40- 6.40		4.75- 6.25		4.25- 6.00		2.00- 4.40
	4.40- 6.50		4.50- 6.25		4.25- 5.65		1.75- 4.60
							2.50- 5.30
						Average	$4.8825

WHEAT: Regular grades, cash.

[Price per bushel, in Chicago, on Tuesday of each week, quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan. . . .	$0.72 -$0.72½	Apr. .	$0.75 -$0.85	July . .	$0.91¼-$1.04	Oct . .	$0.94½-$1.10
	.71¼- .71¾		.75¾- .85		.91⅝- 1.02		1.00 - 1.15
	.72 - .72½		.76⅞- .85		.89⅞- 1.02		1.03¼- 1.20
	.73⅞- .74¼		.77⅛- .86		.89¼- 1.01		.97⅜- 1.15
	.74⅛- .74⅝		.78⅛- .86½		.89⅞- 1.02		.91½- .95¾
Feb. . . .	.73¼- .85	May . .	.82⅜- .90	Aug . . .	.88¼- 1.01	Nov . . .	.93¼- .95
	.75 - .86		.91⅝- 1.01		.82 - .96		.91¼- .93¼
	.72⅞- .84		.96¼- 1.04		.84 - .97		.92⅞- .94⅛
	.74½- .84½		.96¼- 1.05		.90⅛- 1.05		.92½- .94⅜
Mar.	.72½- .84	June.	.92¼- 1.02	Sept . . .	.91¼- 1.07	Dec	.94¼- .95¼
	.71⅝- .85		.91¼- 1.02½		.93¼- 1.09		.92⅜- .93¼
	.72⅝- .85		.89¼- 1.02		.94¼- 1.08		.95⅝- .98½
	.73½- .84		.90¼- 1.03		.95¼- 1.09		.97¾- .98¼
							.97⅞- .99⅞
						Average.	$0.9073

FOOD, ETC.

BEANS: Medium, choice.

[Price per bushel, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month	Price	Month	Price	Month	Price.
Jan.	$1.55	Apr. . .	$1.45-$1.47½	July . . .	$1.70	Oct	$2.30
Feb.	1.50	May . . .	1.45	Aug . . .	1.65	Nov	$2.25 - 2.27½
Mar.	1.50	June . . .	1.85	Sept . .	$1.80- 1.82½	Dec. . . .	2.27½- 2.30
						Average.	$1.7771

BREAD: Crackers, Boston, butter, in boxes.

[Price per pound, in New York, on the first of each month.]

Jan.	$0.09	Apr. . .	$0.09	July . . .	$0.09	Oct	$0.09
Feb.	.09	May . . .	.09	Aug . . .	.09	Nov	.09
Mar.	.09	June . . .	.09	Sept . . .	.09	Dec	.09
						Average.	$0.09

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

BREAD: Crackers, soda, N. B. C., in boxes.

[Price per pound, in New York, on the first of each month, quotations from the Merchants' Review]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan ..	$0.06½	Apr....	$0.06½	July...	$0.06½	Oct....	$0.06½
Feb	.06½	May ..	.06½	Aug ..	.06½	Nov....	.06½
Mar. ...	.06½	June.	.06½	Sept...	.06½	Dec....	.06½
						Average.	$0.0650

BREAD: Loaf, 1 pound after baking.

[Price per loaf, in Washington, D. C., on the first of each month. Weight before baking, 18 ounces. Price per pound (before baking), January to December, $0.0356]

Jan...	$0.04	Apr..	$0.04	July....	$0.04	Oct...	$0.04
Feb.....	.04	May...	.04	Aug	.04	Nov.....	.04
Mar....	.04	June.	.04	Sept...	.04	Dec....	.04
						Average	$0.04

BREAD: Loaf, homemade.

[Price per loaf, in New York, on the first of each month. Weight before baking, 17 ounces. Price per pound (before baking), January to December, $0.0376. Standard weight and standard prices charged by the Bakers' Association, which includes leading bread manufacturers in New York and Brooklyn, and one or two in New Jersey who deliver bread in Manhattan]

Jan...	$0.04	Apr...	$0.04	July....	$0.04	Oct....	$0.04
Feb. ...	.04	May....	.04	Aug..	.04	Nov.....	.04
Mar. ..	.04	June...	.04	Sept ..	.04	Dec.....	.04
						Average.	$0.04

BREAD: Loaf, Vienna.

[Price per loaf, in New York, on the first of each month. Weight before baking, 16 ounces. Price per pound (before baking), January to December, $0.04. Standard weight and standard prices charged by the Bakers' Association, which includes leading bread manufacturers in New York and Brooklyn, and one or two in New Jersey who deliver bread in Manhattan]

Jan. .	$0.04	Apr ...	$0.04	July...	$0.04	Oct... .	$0.04
Feb . .	.04	May...	.04	Aug....	.04	Nov. .	.04
Mar. ...	.04	June ..	.04	Sept...	.04	Dec..	.04
						Average.	$0.04

BUTTER: Creamery, Elgin.

[Price per pound, in Elgin, Ill., on Monday of each week, quotations furnished by W. C. Willson, manager of the Elgin Dairy Report]

Jan.....	$0.32	Apr....	$0.30	July....	$0.24	Oct.....	$0.30
	.29		.30		.24½		.29½
	.29½		.30		.25		.29
	.32		.33		.25		.27
			.27		.24		
Feb. ...	.32	May....	.25	Aug....	.24	Nov.....	.24
	.33		.24		.24½		.27
	.33		.23		.24½		.27
	.33		.23		.25½		.27
					.26		
Mar.....	.32	June...	.23	Sept...	.27	Dec.....	.27
	.31		.23		.27½		.28
	.30		.23		.28½		.28½
	.30		.23½		.29½		.29
							.29
						Average.	$0.2761

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

BUTTER: Creamery, extra.

[Price per pound, in New York, on Tuesday of each week; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month	Price.	Month.	Price.
Jan.....	$0.33	Apr...	$0.30½-$0.31	July...	$0.24½-$0.25	Oct.....	$0.29½
	$0.32½-.33		.30½-.31		.25½-26		.30
	.28-.28½		.30½-31		25¾-26½		28½
	.30½-.31		34½-35		25½-26		.28
	.32½		27		.24½-25		.27
Feb....	.32½-.33	May..	27½	Aug...	24½	Nov....	.24½
	.32½-.33		24-.24½		.24½		.28
	.33½-.34		24½		24½		.28
	.33½-.34		24½-25		25½		.28
Mar	.33½-34	June...	24½-25	Sept...	26½	Dec....	.28
	.31-.32		23¾-.24		.27½		.29
	29½-30		23¾-24		27½		$0.28½-29
	30½-.31		24½-25		28½		29-29½
							29-29½
						Average	$0.2830

BUTTER: Dairy, New York State, tubs and half tubs, fancy.

[Price per pound, in New York, on Tuesday of each week; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.27-$0.29	Apr...	$0.28-$0.29	July..	$0.23-$0.23½	Oct....	$0.28-$0.28½
	27-29		28-.29		24-24½		.28½-29
	.25-26		29-30		24½-25		28
	26-28		33		24½-25		.27½-28
	27-29		26		24		.26½-27
Feb..	27-29	May...	.26-.26½	Aug...	24	Nov....	.24-24½
	.28-29		23½-24		24		27
	.31-32		23½-24		24		.27
	.31-32		24		24		27
Mar.....	.31-32	June..	.24	Sept...	.25-25½	Dec...	27
	.30		23		26-26½		27-28
	.28-29		23		26½-27		27-28
	28-29		23-23½		27½-28		27-28
							.27-.28
						Average.	$0.2671

CHEESE: New York State, full cream, large, colored, best grades.

[Price per pound, in New York, on Tuesday of each week; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.14½	Apr....	$0.15	July...	$0.12½	Oct....	$0.14¾
	.14¾		.15		.12½		.15½
	.14½		15		12½		16
	14½		15		12½		.16½
	.14½		.15		.12½		.16½
Feb.....	.14½	May...	.15	Aug...	11½	Nov...	.15
	.14¾		15		.12		.15
	.14¾		12½		.12½		.15
	.14¾		$0.12-.12½		.12½		.15
Mar.....	.14¾	June.	.12½	Sept...	13½	Dec...	.15½
	.14¾		.12		.13½		.15¾
	.14¾		11¾		13½		.15¾
	.14¾		.11¾		.13½		.15¾
							.15½
						Average	$0.1414

COFFEE: Rio No. 7, Brazil grades.

[Price per pound, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.07¼	Apr...	$0.07	July...	$0.06¼-$0.06⅜	Oct....	$0.06⅜-$0.06½
Feb ..	$0.06⅞-.07	May...	.06¾	Aug...	.06¼	Nov....	.06
Mar.....	.07½	June...	.06½	Sept...	.06¼-.06⅜	Dec. ...	.05⅞
						Average.	$0.0658

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

EGGS: New-laid, fancy, near-by.

[Price per dozen, in New York, on Tuesday of each week; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan. .	$0.33-$0.36	Apr. . .	$0.18 -$0.19	July . . .	$0.18½-$0.21	Oct. . .	$0.26-$0.32
	.27- .30		.18½- .19		.19 - .21		.29- .36
	.31- .35		.19 - .20		.20 - .23		.29- .36
	.30- .34		.19 - .20		.21 - .25		.32- .40
	.28- .32		.19½- .21		.22- .26		.32- .42
Feb. .	.29- .31	May	.20 - .21	Aug. . .	.23 - .25	Nov. . . .	.31- .45
	.27- .30		.18½- .20		.23 - .28		.38- .50
	.28- .32		.18- .19		.23- .28		.38- .50
	.28- .30		.18- .19		.24- .30		.38- .50
Mar. .	.20- .23	June.	.18- .19	Sept. . .	.24- .30	Dec.	.38- .50
	.19- .22		.17½- .19		.24- .30		.38- .50
	.19- .22		.18- .20		.25- .30		.43- .50
	.20- .22		.18 - .20		.26- .32		.32- .40
							.27- .34
						Average.	$0.2771

FISH: Cod, dry, bank, large.

[Price per quintal, in Boston, on the first of each month; quotations from the Boston Herald.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan. . .	$8.00	Apr. .	$8.00	July . . .	$8.00	Oct. . .	$7.25-$7.50
Feb. .	8.00	May .	8.00	Aug. . .	$7.25- 7.50	Nov. . .	7.25- 7.50
Mar.	8.00	June.	8.00	Sept. . .	7.25- 7.50	Dec. . .	7.25- 7.50
						Average.	$7.7396

FISH: Herring, shore, round, large.

[Price per barrel, in Boston, on the first of each month; quotations from the Boston Globe.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan. . .	$6.00	Apr.	$6.00	July . .	$6.00	Oct. . .	$6.50
Feb. . .	6.00	May . .	6.00	Aug. . .	(a)	Nov. . . .	6.50
Mar.	6.00	June.	6.00	Sept. . .	(a)	Dec. .	6.50
						Average.	$6.1500

FISH: Mackerel, salt, large No. 3s.

[Price per barrel, in Boston, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan. . . .	$17.00	Apr. . . .	$12.00	July . . .	$12.50	Oct.	$14.00
Feb. . .	16.50	May . . .	12.00	Aug. .	12.50	Nov.	14.50
Mar	16.00	June . . .	12.50	Sept. . .	13.00	Dec. . .	14.50
						Average.	$13.9167

FISH: Salmon, canned, Columbia River, 1-pound talls.

[Price per dozen cans, in New York, on the first of each month; quotations from the New York Commercial.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan. . . .	$1.60-$1.75	Apr. . .	$1.60-$1.75	July . . .	(a)	Oct.	(a)
Feb. . .	1.60- 1.75	May .	1.60- 1.75	Aug. . .	$1.65	Nov	(a)
Mar. .	1.60- 1.75	June . . .	1.65	Sept. . .	(a)	Dec. . . .	(a)
						Average.	$1.6679

[a] No quotation for month.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

FLOUR: Buckwheat.

[Price per hundred pounds, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month	Price.	Month	Price.	Month.	Price.	Month.	Price.
Jan.....	$2 20-$2 30	Apr...	$2.10-$2 20	July ...	(a)	Oct ..	$3.00
Feb. .	2 10- 2 25	May .	(a)	Aug ..	(a)	Nov ..	$3 15- 3.25
Mar....	2 00- 2 20	June...	(a)	Sept...	(a)	Dec. ..	3 10- 3 15
						Average	$2 5714

FLOUR: Rye.

[Price per barrel, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.	$3 75-$4 20	Apr. .	$3 60-$4 10	July .	$4 75-$5 40	Oct.....	$5 00-$5 35
Feb. .	3 65- 4 20	May .	3 65- 4 25	Aug	4 60- 5 25	Nov.....	4 90- 5 50
Mar. .	3 65- 4 15	June.	4 85- 5 25	Sept...	4.50- 5 15	Dec ...	5 25- 5 50
						Average.	$4.6021

FLOUR: Wheat, spring patents.

[Price per barrel, in New York, on Tuesday of each week, quotations furnished by the statistician of the New York Produce Exchange.]

Jan.....	$3 80-$4 35	Apr..	$3 90-$4 40	July...	$4 80-$5 35	Oct ..	$5 25-$5 75
	3 80- 4 35		3 90- 4 40		5 00- 5 40		5 25- 5.75
	3 80- 4 35		3 90- 4 40		5 00- 5 40		5.50- 6 00
	3 80- 4 35		3 90- 4 40		4 85- 5 35		5.40- 5.75
	3 85- 4 40		4 00- 4 50		4 85- 5 35		5.40- 5 75
Feb. .	3 90- 4 50	May...	4 15- 4 60	Aug...	4 85- 5 40	Nov....	5 10- 5.65
	4 05- 4 60		4 45- 5 00		4 75- 5 25		5 20- 5.80
	4 00- 4 50		4 75- 5 40		4 75- 5 25		5.20- 5.80
	4 00- 4 45		4 80- 5 40		4 75- 5 25		5.10- 5.70
Mar....	3 90- 4.40	June...	4 80- 5 40	Sept...	4 85- 5 40	Dec...	5.10- 5.70
	3 90- 4 40		4 80- 5 40		5 00- 5 60		5 10- 5.65
	3 90- 4 40		4 75- 5 30		5 00- 5 60		5.10- 5 65
	3 90- 4 40		4.75- 5 30		5 20- 5 80		5 30- 5 85
	....		....		....		5 30- 5.85
						Average.	$4.8755

FLOUR: Wheat, winter straights.

[Price per barrel, in New York, on Tuesday of each week; quotations furnished by the statistician of the New York Produce Exchange.]

Jan... .	$3 15-$3 45	Apr....	$3 20-$3 45	July...	$4 15-$4 55	Oct.	$4 30-$4.60
	3 15- 3 45		3 20- 3 45		4 15- 4 55		4 35- 4.75
	3 15- 3 45		3.20- 3 45		4 15- 4 55		4 55- 5 00
	3.15- 3 45		3 20- 3.45		4 00- 4 40		4.40- 4 80
	3 15- 3 50		3 25- 3 50		4 00- 4 40		4.40- 4.80
Feb. ...	3.20- 3.50	May...	3 30- 3 55	Aug...	3 90- 4 25	Nov....	4 30- 4.75
	3 20- 3.50		3.75- 4 00		3 90- 4 25		4.35- 4.80
	3 20- 3 50		4.10- 4 40		3 90- 4 25		4 35- 4.80
	3 20- 3 45		4.20- 4 50		3 90- 4 35		4.30- 4.75
Mar....	3.20- 3 45	June...	4.20- 4 50	Sept...	4 00- 4 30	Dec ..	4.30- 4.75
	3 20- 3 45		4.20- 4 50		4 00- 4.40		4.25- 4.65
	3.20- 3.45		4 00- 4.40		4 00- 4.40		4.25- 4.70
	3.20- 3 45		4 00- 4.40		4 20- 4.60		4.35- 4 75
	....		....		....		4.35- 4.75
						Average.	$3 9877

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[a] No quotation for month.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

FRUIT: Apples, evaporated, choice.

[Price per pound, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.08¼-$0.08½	Apr....	$0.07	July...	$0.08	Oct....	$0.09¾
Feb..	.08⅛-.08⅜	May...	$0.07-.07¼	Aug...	.08¼	Nov....	$0.09½-.09¾
Mar..	.08-.08½	June...	.07-.07¼	Sept...	.09	Dec....	.10
						Average	$0.0843

FRUIT: Apples, sun-dried.

[Price per pound, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan....	$0.06½	Apr...	$0.06	July...	(a)	Oct....	(a)
Feb....	$0.06-.07	May...	.06	Aug...	(a)	Nov....	(a)
Mar....	.06-.06½	June.	.06	Sept...	(a)	Dec....	$0.07
						Average.	$0.0658

FRUIT: Currants, Amalia's, in barrels.

[Price per pound, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$0.07¼	Apr...	$0.07¼-$0.07⅜	July...	$0.07	Oct....	$0.06¾-$0.07
Feb....	$0.07⅛-.07⅜	May...	.06⅞-.07	Aug...	$0.06¾-.07	Nov....	.06¾-.07
Mar....	.07⅛-.07½	June...	.06¾-.07	Sept...	.06½-.06¾	Dec....	.06¾-.06⅞
						Average.	$0.0703

FRUIT: Prunes, California, 60s to 70s, in 25-pound boxes.

[Price per pound, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$0.05½-$0.06	Apr....	$0.05⅛-$0.05¾	July...	$0.06-$0.06¼	Oct.....	$0.06⅜-$0.06⅝
Feb....	.05⅜-.05¾	May...	.04¾-.05¼	Aug...	.06-.06¼	Nov.....	.06⅜-.06⅝
Mar.....	.05⅜-.05¾	June...	.05½-.06	Sept...	.06½-.06¾	Dec.....	.06⅛-.06¼
						Average.	$0.0593

FRUIT: Raisins, California, London layer.

[Price per box, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$1.45-$1.55	Apr....	$1.50-$1.60	July...	$1.50-$1.65	Oct....	$1.75-$1.85
Feb.....	1.35-1.45	May..	1.50-1.65	Aug..	1.75-1.85	Nov.....	1.75-1.85
Mar.....	1.35-1.45	June...	1.50-1.65	Sept...	1.75-1.85	Dec.....	1.70-1.80
						Average.	$1.6271

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a No quotation for month.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

GLUCOSE.

[Price per hundred pounds, in New York, on the first of each month; from January to April the prices are for 41° and 43° mixing, and May to December for 42° mixing; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.	$2.11	Apr.	$2.11	July	$2.26-$2.31	Oct.	$2.38
Feb.	2.11	May	2.11	Aug.	2.26- 2.31	Nov.	2.48
Mar.	2.11	June	$2.26- 2.31	Sept.	2.36- 2.41	Dec.	2.48
						Average.	$2.2008

LARD: Prime, contract.

[Price per pound, in New York, on Tuesday of each week; quotations furnished by the statistician of the New York Produce Exchange.]

Jan.	$0.0930-$0.0960	Apr.	$0.0920-$0.0945	July	$0.0880-$0.0930	Oct.	$0.0910-$0.0940
	.0950- .0990		.0880- .0925		.0870- .0915		.0910- .0955
	.0950- .0985		.0870- .0910		.0875- .0930		.0940- .0980
	.0965- .1000		.0875- .0910		.0890- .0950		.0910- .0965
	.1000- .1025		.0880- .0900		.0920- .0950		.0880- .0915
Feb.	.1000- .1030	May	.0895- .0930	Aug.	.0905- .0940	Nov.	.0840- .0900
	.1010- .1030		.0935- .0965		.0900- .0940		.0875- .0915
	.0980- .1010		.0940- .0965		.0885- .0930		.0865- .0900
	.0980- .1000		.0910- .0945		.0905- .0950		.0775- .0840
Mar.	.0970- .0985	June	.0915- .0950	Sept.	.0900- .0915	Dec.	.0845- .0875
	.0930- .0970		.0870- .0920		.0900- .0945		.0830- .0860
	.0905- .0960		.0870- .0920		.0895- .0915		.0830- .0850
	.0885- .0935		.0865- .0920		.0905- .0950		.0810- .0825
							.0800- .0825
						Average.	$0.0920

MEAL: Corn, fine white.

[Price per bag of 100 pounds, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.	$1.30	Apr.	$1.30	July	$1.35	Oct.	$1.55-$1.62½
Feb.	1.30	May	$1.25- 1.27½	Aug.	$1.25- 1.35	Nov.	1.53- 1.55
Mar.	1.30	June	1.30- 1.35	Sept.	1.40	Dec.	1.30- 1.35
						Average.	$1.3575

MEAL: Corn, fine yellow.

[Price per 100 pounds, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.	$1.30	Apr.	$1.30	July	$1.35	Oct.	$1.55-$1.62½
Feb.	1.30	May	$1.25- 1.27½	Aug.	$1.25- 1.35	Nov.	1.53- 1.55
Mar.	1.30	June	1.30- 1.35	Sept.	1.40	Dec.	1.30- 1.35
						Average.	$1.3575

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

MEAT: Bacon, short clear sides, smoked, loose.

[Price per pound, in Chicago, on Tuesday of each week; quotations from the Daily Trade Bulletin.]

Month	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.09⅝ $0.09¾	Apr..	$0.09½ $0.09⅝	July..	$0.09¼ $0.09⅜	Oct...	$0.09½ $0.09⅝
	.09⅝ .09¾		.09⅝ .09¾		.09¼ .09⅜		.09½- .09⅝
	.09¾ .09⅞		.09⅜ .09½		.09¼- .09⅜		.09½- .09⅝
	.09⅞ .10		.09½- .09⅝		.09¼- .09⅜		.09½- .09⅝
	.09⅞ .10		.09½- .09⅝		.09¼ .09⅜		.09½ .09⅝
Feb....	.10¼- .10⅜	May.	.09⅝ .09⅞	Aug...	.09⅜- .09½	Nov....	.09½ .09⅝
	.10⅛ .10¼		.09⅞ .10		.09¼ .09⅜		.09¼- .09⅜
	.10⅛ .10¼		.09¾ .09⅞		.09⅜- .09½		.09¼ .09⅜
	.10⅛ .10¼		.09¾ .09⅞		.09¼- .09⅜		.09 - .09⅛
Mar..	.10 - .10⅛	June...	.09¾ .09⅞	Sept...	.09⅜- .09½	Dec..	.08⅞- .09⅛
	.10 - .10⅛		.09⅝ .09⅞		.09¼- .09⅜		.08⅝- .08¾
	.10 .10⅛		.09⅜ .09½		.09½- .09⅝		.08⅝- .08¾
	.09⅝ .09¾		.09¼- .09⅜		.09½ .09⅝		.08¼ .08⅜
							.08¼- .08⅜
						Average.	$0.0954

MEAT: Bacon, short rib sides, smoked, loose.

[Price per pound, in Chicago, on Tuesday of each week, quotations from the Daily Trade Bulletin.]

Jan.....	$0.09¼ $0.09⅜	Apr.	$0.09¼-$0.09⅜	July..	$0.09⅛ $0.09¼	Oct....	$0.09⅛ $0.09¼
	.09¼ .09⅜		.09¼ .09⅜		.09⅛ .09¼		.09⅛ .09¼
	.09⅜- .09½		.09⅛ .09¼		.09⅛ .09¼		.09⅛ .09¼
	.09½ .09⅝		.09⅛ .09¼		.09 .09⅛		.09⅛- .09¼
	.09⅝ .09¾		.09⅛ .09¼		.09 - .09⅛		.09 - .09⅛
Feb...	.09⅞ .10	May..	.09¼ .09⅜	Aug...	.09 - .09⅛	Nov...	.09 - .09⅛
	.10 .10⅛		.09¼ .09⅜		.09⅛- .09¼		.08⅞- .09
	.09¾- .09⅞		.09⅜ .09½		.09⅜- .09½		.08⅞ .09
	.09¾ .09⅞		.09⅜ .09½		.09 .09⅛		.08⅝ .08¾
Mar...	.09½ .09⅝	June..	.09⅜ .09½	Sept.	.09 .09⅛	Dec..	.08½ .08⅝
	.09½ .09⅝		.09¼ .09⅜		.09⅛ .09¼		.08 .08⅛
	.09½ .09⅝		.09⅛- .09¼		.09⅛ .09¼		.08 - .08⅛
	.09¼- .09⅜		.09⅛- .09¼		.09⅛- .09¼		.07⅞- .08
							.07⅞- .08
						Average.	$0.0919

MEAT: Beef, fresh, native sides.

[Price per pound in New York, on Tuesday of each week, quotations from the New York Daily Tribune.]

Jan..	$0.06½-$0.09½	Apr..	$0.07 $0.09	July..	$0.08½ $0.10	Oct...	$0.08½-$0.10¾
	.07 - .09½		.07 .09¼		.09 - .10		.08 .10¾
	.07 - .09½		.07½- .09½		.09 - .10½		.08 - .10¾
	.07 - .09½		.07½ .09½		.09 - .10½		.08 - .10¾
	.07 - .09		.07½ .09½		.08½- .10		.08 .10½
Feb..	.07 - .09	May...	.07½- .09	Aug..	.09½ .11	Nov..	.08 .10½
	.07 .09½		.08 - .09¼		.08½ .10¼		.08 .10¾
	.07 - .09		.08 - .09½		.08½- .10½		.08 .11
	.07 - .09		.08 .09¼		.08 .10½		.08 - .10½
Mar....	.07 - .09	June..	.08 - .09½	Sept..	.08 - .10¼	Dec..	.08 - .10
	.07 - .09		.09 - .10		.08 .10½		.07½- .10
	.07 - .09		.08½- .10		.08 .10½		.07½- .10
	.07 .09		.08½ .10		.08 - .10½		.07½- .09½
							.07½- .09½
						Average.	$0.0884

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

MEAT: Beef, salt, extra mess.

[Average weekly price per barrel, in New York, quotations furnished by the statistician of the New York Produce Exchange.]

Month.	Price.	Month.	Price.	Month	Price.	Month.	Price.
Jan...	$8 50	Apr...	$9 75	July..	$9 75	Oct..	$10 25
	8 50		9 75		9 75		10 25
	9 25		9 75		9 75		10 25
	9.25		9 75		9 75		10 25
Feb...	9 25	May...	9 75	Aug...	9 75	Nov....	10 25
	9 25		9 75		9 75		10.25
	9 25		9 75		9 75		10 25
	9 25		9 75		9 75		10 25
	....	June..	9 75		9 75		10 25
Mar..	9 75		9 75	Sept...	9 75	Dec..	10 25
	9 75		9 75		9 75		10.75
	9 75		9 75		10 25		10 75
	9 75		9 75		10 25		10 75
	9 75						
						Average	$9.8173

MEAT: Beef, salt, hams, western.

[Price per barrel, in New York, on Tuesday of each week, quotations furnished by the statistician of the New York Produce Exchange.]

Jan....	$23 50-$25 00	Apr..	$24 00-$26 00	July....	$21 00-$26 00	Oct...	$29 00
	23 50- 25 00		24 00- 26 00		24 00- 26 00		29.00
	23 50- 25 00		24 00- 26 00		24 00- 26 00		29 00
	23 50- 25 00		24 00- 26 00		24 00- 26 00		28 50
	23 50- 25 00		24 00- 26 00		24 00- 26 00		28 50
Feb.....	23 50- 25 00	May...	24 00- 26 00	Aug..	25 00- 27 00	Nov....	29 00
	23 50- 25 00		24 00- 26 00		25 00- 27 00		29 00
	24 00- 26 00		24 00- 26 00		25 50- 27 00		29.00
	24 00- 26 00		24 00- 26 00		26.00- 27 50		29 00
Mar.....	24 00- 26 00	June.	24 00- 26 00	Sept...	28 50	Dec. ...	27.50
	24 00- 26 00		24 00- 26 00		28 50		27 50
	24 00- 26 00		24 00- 26 00		28 50		$25 00- 27.00
	24 00- 26 00		24 00- 26 00		28 50		24 50- 26 50
							24 50- 26 50
						Average.	$26 0519

MEAT: Hams, smoked, loose.

[Price per pound on Tuesday of each week, quotations from the Daily Trade Bulletin.]

Jan.....	$0 12¼-$0 13½	Apr..	$0 13¼-$0 13¾	July ..	$0 13 -$0 13¼	Oct. ..	$0 12½-$0 13½
	.13 - 13½		13¼- 13½		13 - 13¼		.12½- .13½
	.12¼- .13¼		.13¼- 13½		13¼ .14		.12½ .13¾
	.12¼- 13¼		13¼- 13½		13¼- 13¾		.12½- 13½
	13 - 13¼		13¼- 13½		13¼ 13¾		.12¼- .13¼
Feb.....	.13½- 13¾	May .	.13½- 13¾	Aug .	13¼- 14	Nov ..	12¼- .13¼
	.13½- .13¾		13½- 14		13 14		.12 - 13
	.13½- 13¾		13½- .14		.13 14		.11¾- .12¾
	.13½- 13¾		13½- 14		[illegible]- 14		.10¾ .12
Mar....	.13¼- 13½	June.	13½- .14	Sept...	12¾- 13¾	Dec. .	.10¾ .11¾
	.13¼- 13¾		13¼- .13¾		12¾ 13¾		10¾- 11¾
	.13¼- 13¾		.13¼- 13¾		.12½- 13½		10 - 10¾
	.13¼- .13½		.13 - .13¾		12½- 13½		.09¾ .10¼
							.09¼- .10¼
						Average.	$0.1303

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

MEAT: Mutton, dressed.

[Price per pound, in New York, on Tuesday of each week, quotations from the New York Daily Tribune.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.	$0.07½-$0.10	Apr.	$0.08-$0.10½	July	$0.06-$0.09	Oct.	$0.07-$0.09½
	.07½- .10		.09- .11		.07- .09½		.07½- .09½
	.07½- .09½		.09- .11½		.07- .09		.07- .09½
	.07½- .09½		.09- .11½		.07½- .09½		.07- .09½
	.07½- .09½		.09- .11		.07- .09½		.07- .09½
Feb.	.07½- .09½	May	.09- .11½	Aug.	.07- .09½	Nov.	.07- .09½
	.07½- .09½		.09- .11½		.07- .10		.07- .09½
	.07½- .09½		.09- .12		.07- .10		.07- .10
	.07½- .09½		.09- .12		.07- .09½		.07- .09
Mar.	.07½- .09½	June	.10- .13	Sept.	.07- .09½	Dec.	.07- .09½
	.08- .10		.09- .12		.07- .09½		.06½- .08½
	.08- .10½		.08- .10½		.07- .09½		.07- .09
	.08½- .10½		.08- .09		.07- .09½		.06½- .09
							.06½- .09
						Average	$0.0875

MEAT: Pork, salt, mess, old to new.

[Price per barrel, in New York, on Tuesday of each week, quotations furnished by the statistician of the New York Produce Exchange.]

Jan.	$17.50-$18.50	Apr.	$17.50-$18.25	July	$18.00-$18.50	Oct.	$16.75-$17.50
	17.50- 18.50		17.50- 18.25		18.00- 18.50		16.75- 17.50
	17.50- 18.50		17.50- 18.25		18.00- 18.50		17.00- 17.75
	17.50- 18.50		17.25- 18.00		18.00- 18.50		17.00- 17.75
	17.50- 18.50		17.25- 18.00		18.00- 18.50		16.25- 17.25
Feb.	18.00- 18.75	May	17.25- 18.00	Aug.	18.00- 18.50	Nov.	16.00- 17.00
	18.50- 19.25		17.75- 18.50		18.00- 18.50		16.00- 16.75
	18.50- 19.25		17.75- 18.50		17.75- 18.25		15.50- 16.00
	18.50- 19.25		17.75- 18.50		17.75- 18.25		15.25- 15.75
Mar.	18.00- 18.75	June	17.75- 18.50	Sept.	17.50- 18.00	Dec.	15.00- 15.75
	18.00- 18.75		17.75- 18.50		17.50- 18.00		15.00- 15.75
	17.75- 18.50		17.50- 18.25		17.50- 18.00		14.75- 15.50
	17.50- 18.25		17.75- 18.50		17.50- 18.00		14.50- 15.25
							14.50- 15.25
						Average	$17.5684

MILK: Fresh.

[Average monthly exchange price per quart, net price at shipping stations subject to a freight rate to New York of 26 cents per can of 40 quarts, quotations from the Milk Reporter.]

Jan.	$0.0375	Apr.	$0.0325	July	$0.0263	Oct.	$0.0400
Feb.	.0350	May	.0287	Aug.	.0309	Nov.	.0400
Mar.	.0325	June	.0250	Sept.	.0338	Dec.	.0400
						Average	$0.0335

MOLASSES: New Orleans, open kettle.

[Price per gallon, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.	$0.37-$0.48	Apr.	$0.37-$0.38	July	$0.37-$0.48	Oct.	$0.37-$0.48
Feb.	.37- .48	May	.37- .38	Aug.	.37- .48	Nov.	.37- .48
Mar.	.37- .38	June	.37- .48	Sept.	.37- .48	Dec.	.34- .42
						Average	$0.4088

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

RICE: Domestic, choice, head.

[Price per pound, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0 04¾-$0 05	Apr..	$0 04¾-$0 05	July.	$0 05-$0 05½	Oct.....	$0 06-$0 06¼
Feb..	04¾- 05	May.	04¾- 05	Aug...	.06- .06¼	Nov...	.05⅞- 06⅛
Mar...	.04¾- 05	June.	05 - 05¼	Sept...	06- 06¼	Dec...	.05⅞- 06⅛
						Average.	$0 0534

SALT: American, medium.

[Price per barrel, in Chicago, each week; quotations furnished by the secretary of the Chicago Board of Trade.]

Jan...	$0 80	Apr.	$0 85	July....	$0 85	Oct...	$0 73
	.80		.85		73		73
	.80		.85		73		.76
	80		85		.73		.76
Feb.	80	May...	.85	Aug....	.73	Nov....	.76
	80		.85		67		.76
	80		85		.73		.82
	.80		.85		73		.82
	....		.85		73		.82
Mar....	80	June.	85	Sept..	.73	Dec.....	.82
	80		.85		73		.82
	.80		85		73		.82
	80		85		73		.82
	.80		....		....		....
						Average.	$0 7931

SODA: Bicarbonate of, American.

[Price per pound, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan...	$0 0130	Apr..	$0 0130	July..	$0 0130	Oct...	$0.0130
Feb.....	0130	May...	.0130	Aug....	0130	Nov.....	.0130
Mar....	.0130	June..	.0130	Sept...	.0130	Dec....	.0130
						Average.	$0.0130

SPICES: Nutmegs, 105s to 110s.

[Price per pound, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan....	$0.15½-$0 15¾	Apr...	$0 15 - $0 15½	July...	$0.13 -$0 13½	Oct ...	$0 12¾ $0.13
Feb...	.14½ 15	May...	14½ .15	Aug....	13½ 14	Nov.....	12½- .12¾
Mar.....	.14½- .15	June...	14¾- 15	Sept...	.13¼- 13½	Dec..	12 - .12¾
						Average.	$0.1397

SPICES: Pepper, Singapore.

[Price per pound, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$0.10½-$0 10¾	Apr...	$0.10½-$0.10¾	July...	$0 09¼-$0 09½	Oct.....	$0.09½-$0 09¾
Feb.....	.10½- .10¾	May...	.10 - .10¼	Aug....	.09¼- .09½	Nov.....	09½ - .09¾
Mar.....	.10½- .10¾	June...	.09¾- .10	Sept...	.09¼- .09½	Dec.....	.08¾ 09
						Average.	$0 0994

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

STARCH: Pure corn, for culinary purposes.

[Price per pound, in New York, on the first of each month; quotations from the Merchants' Review.]

Month	Price.	Month	Price.	Month.	Price.	Month.	Price.
Jan.	$0.06	Apr.	$0.06	July.	$0.06	Oct.....	$0.06
Feb.	.06	May.	.06	Aug...	.06	Nov...	.06
Mar.	.06	June.	.06	Sept...	.06	Dec.	.06
						Average	$0.0600

SUGAR: 89° fair, refining.

[Price per pound, in New York, on Thursday of each week, including import duty of 1.44 cents per pound; quotations from Willett & Gray's Weekly Statistical Sugar Trade Journal.]

Jan...	$0.0306	Apr....	$0.0311	July.	$0.0333½	Oct....	$0.0345
	.0306		.0323½		.0333½		.0345
	.0300		.0326½		.0333½		.0340
	.0298		.0323		.0344		.0340
	.0298						.0340
Feb...	.0292	May.	.0326½	Aug...	.0344	Nov...	.0340
	.0292		.0333		.0344		.0330
	.0288		.0346		.0325		.0320
	.0292		.0342		.0339		.0312½
			.0340		.0342		
Mar....	.0301	June.	.0334	Sept...	.0342	Dec	.0312½
	.0300		.0323		.0345		.0335
	.0301		.0321		.0345		.0335
	.0308		.0337½		.0345		.0335
						Average	$0.03251

SUGAR: 96° centrifugal.

[Price per pound, in New York, on Thursday of each week, including import duty of 1.685 cents per pound; quotations from Willett & Gray's Weekly Statistical Sugar Trade Journal.]

Jan.....	$0.0356	Apr..	$0.0361	July...	$0.0383½	Oct.....	$0.0395
	.0356		.0373½		.0383½		.0395
	.0350		.0376½		.0383½		.0390
	.0348		.0373		.0394		.0380
	.0348						.0390
Feb...	.0342	May.	.0376½	Aug...	.0394	Nov...	.0390
	.0342		.0383		.0394		.0380
	.0348		.0386		.0389		.0370
	.0342		.0392		.0389		.0362½
			.0390		.0392		
Mar...	.0351	June.	.0384	Sept...	.0392	Dec...	.0362½
	.0350		.0373		.0395		.0385
	.0351		.0371		.0395		.0385
	.0358		.0387½		.0395		.0385
						Average.	$0.03754

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Continued.

SUGAR: Granulated, in barrels.

[Price per pound, in New York, on Thursday of each week, including import duty of 1.95 cents per pound, quotations from Willett & Gray's Weekly Statistical Sugar Trade Journal]

Month.	Price	Month	Price.	Month.	Price.	Month.	Price.
Jan....	$0.0462	Apr...	$0.0455	July..	$0.0485	Oct	$0.0654
	.0450		.0465		.0475		.0465
	.0462		.0465		.0475		.0465
	.0460		.0460		.0470		.0465
	.0465						.0465
Feb....	.0450	May...	.0460	Aug...	.0465	Nov..	.0465
	.0455		.0470		.0465		.0460
	.0455		.0485		.0465		.0460
	.0455		.0485		.0465		.0460
			.0485		.0465		
Mar...	.0455	June..	.0485	Sept...	.0465	Dec....	.0455
	.0455		.0485		.0465		.0455
	.0455		.0485		.0465		.0455
	.0455		.0485		.0465		.0455
						Average.	$0.04651

TALLOW.

[Price per pound, in New York, on Tuesday of each week, quotations furnished by the statistician of the New York Produce Exchange]

Jan....	$0.06¼	Apr..	$0.06¾	July..	$0.06¼	Oct...	$0.06
	.06⅛		$0.06½- .06⅝		.06⅛		.06
	.06⅜		.06¼		.06⅛		.06
	.06½		.06		.06⅜		.06
	.06 7/16		.05¾		.06⅛		.06
Feb. ..	.06 9/16	May...	.06	Aug..	.06⅜	Nov...	.06
	.06¼		.06⅛		.06⅜		.05¾
	.06⅜		.06⅛		.06⅛		.05 9/16
	.06¼		.06⅛		.06¼		.05 9/16
Mar....	.06¼	June...	.06⅛	Sept...	.06¼	Dec..	.05½
	.06¼		.06¼		.06¼		.05½
	.06¼		.06⅛		.06¼		.05½
	.06¼		.06⅛		.06¼		.05⅝
							.05½
						Average.	$0.0621

TEA: Formosa, fine.

[Price per pound, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin]

Jan.....	$0.22-$0.24	Apr..	$0.22-$0.24	July.	$0.22-$0.24	Oct...	$0.22-$0.24
Feb. .	.22- .24	May.	.22- .24	Aug ..	.22- .24	Nov .	.22- .24
Mar....	.22- .24	June.	.22- .24	Sept...	.22- .24	Dec.. .	.22- .24
						Average	$0.2300

VEGETABLES, FRESH: Onions.

[Price per barrel, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin]

Jan...	$2.00-$5.00	Apr..	$1.50-$3.00	July...	$4.00	Oct...	$2.50-$4.00
Feb. .	3.00- 6.00	May...	1.00- 5.00	Aug....	$3.00- 3.25	Nov....	2.50- 3.75
Mar....	4.00- 7.00	June...	4.00	Sept...	2.00- 2.50	Dec...	2.50- 4.50
						Average.	$3.5000

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FOOD, ETC.—Concluded.

VEGETABLES, FRESH: Potatoes, white, good to fancy.

[Price per bushel, in Chicago, weekly range; quotations furnished by the secretary of the Chicago Board of Trade.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.30-$0.43	Apr....	$0.33-$0.39	July...	$0.30-$0.50	Oct.....	$0.50-$0.58
	.38- .43		.36- .43		.30- .35		.45- .56
	.36- .40		.40- .50		(a)		.60- .63
	.36- .42		.45- .61		(a)		.58- .62
Feb...	.37- .46	May...	.55- .62	Aug...	(a)	Nov....	.55- .58
	.40- .48		.55- .75		(a)		.50- .60
	.40- .45		.60- .75		(a)		.56- .58
	.40- .46		.57- .69		(a)		.47- .57
	....		.60- .70		(a)		.45- .50
Mar....	.41- .17	June..	.55- .65	Sept...	(a)	Dec..	.46- .55
	.41- .45		.55- .60		(a)		.48- .55
	.40- .45		.38- .53		(a)		.48- .55
	.40- .44		.36- .52		(a)		.51- .58
	.33- .42		....		....		....
						Average.	$0.4912

VINEGAR: Cider, Monarch, in barrels.

[Price per gallon, in New York, on the first of each month; quotations from the Merchants' Review.]

Jan....	$0.1700	Apr...	$0.1700	July...	$0.1700	Oct....	$0.1700
Feb....	.1700	May...	.1700	Aug...	.1700	Nov....	.1900
Mar....	.1700	June..	.1700	Sept...	.1700	Dec..	.1800
						Average.	$0.1725

CLOTHS AND CLOTHING.

BAGS: 2-bushel, Amoskeag.

[Price per bag on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.18½	Apr...	$0.19½	July..	$0.19½	Oct...	$0.19½
Feb....	.18½	May...	.19½	Aug...	.19½	Nov....	.19½
Mar....	.18½	June.	.19½	Sept...	.21	Dec.	.19½
						Average.	$0.1938

BLANKETS: 11-4, 5 pounds to the pair, all wool.

[Average price per pound.]

Year.	Price.
1907	$1.00

BLANKETS: 11-4, 5 pounds to the pair, cotton warp, all wool filling.

[Average price per pound.]

1907	$0.80

BLANKETS: 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling.

[Average price per pound.]

1907	$0.60

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[a] No quotation for week.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

BOOTS AND SHOES: Men's brogans, split.

[Price per pair on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$1.30	Apr....	$1 30	July...	$1 27½	Oct....	$1.25
Feb.....	1 30	May...	1 30	Aug...	1 27½	Nov....	1 22½
Mar.....	1 30	June...	1 30	Sept...	1.25	Dec.	1.20
						Average	$1 2720

BOOTS AND SHOES: Men's split boots, russet-bound top, 17-inch, one-half double sole.

[Price per dozen pairs on the first of each month.]

Jan.....	$26 50	Apr....	$26 50	July...	$26 50	Oct...	$26.00
Feb	26 50	May...	26 50	Aug...	26 00	Nov ..	25 50
Mar.....	26 50	June..	26.50	Sept...	26 00	Dec.....	25 00
						Average	$26 1667

BOOTS AND SHOES: Men's vici calf shoes, Blucher bal., vici calf top, single sole.

[Price per pair on the first of each month.]

Jan....	$2 80	Apr...	$2 80	July...	$2 80	Oct.....	$2.80
Feb.....	2 80	May...	2 80	Aug...	2 80	Nov....	2 80
Mar. ...	2 80	June.	2 80	Sept...	2 80	Dec.....	2 80
						Average.	$2.80

BOOTS AND SHOES: Men's vici kid shoes, Goodyear welt.

[Price per pair on the first of each month.]

Jan.....	$2 50	Apr....	$2 50	July...	$2 50	Oct.....	$2.50
Feb.....	2 50	May...	2 50	Aug...	2 50	Nov....	2 50
Mar.....	2.50	June...	2.50	Sept...	2 50	Dec. .	2.50
						Average.	$2.50

BOOTS AND SHOES: Women's solid grain shoes, leather, polish or polka.

[Price per pair on the first of each month.]

Jan.....	$1 02½	Apr....	$1 02½	July...	$1 00	Oct .. .	$1.00
Feb ..	1 02½	May...	1 02½	Aug ..	1 00	Nov....	97½
Mar.....	1.02½	June...	1 00	Sept...	1 00	Dec.....	.97½
						Average.	$1.0063

BROADCLOTHS: First quality, black, 54-inch, made from XXX wool.

[Price per yard on the first of each month.]

Jan.....	$2.02	Apr...	$2 02	July...	$2 02	Oct.....	$2 02
Feb.....	2 02	May...	2 02	Aug...	2 02	Nov....	2.02
Mar.....	2 02	June...	2 02	Sept...	2 02	Dec.....	2.02
						Average.	$2.02

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

CALICO: American standard prints, 64 x 64, 7 yards to the pound.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.0523	Apr....	$0.0570	July...	$0.0618	Oct.....	$0.0665
Feb....	.0523	May...	.0570	Aug...	.0618	Nov....	.0665
Mar....	.0570	June...	.0570	Sept...	.0665	Dec.....	.0665
						Average.	$0.0602

CARPETS: Brussels, 5-frame, Bigelow.

[Price per yard on the first of each month.]

Jan....	$1.2480	Apr....	$1.2480	July...	$1.2480	Oct.....	$1.2480
Feb....	1.2480	May...	1.2480	Aug...	1.2480	Nov....	1.2480
Mar....	1.2480	June...	1.2480	Sept...	1.2480	Dec.....	1.2480
						Average.	$1.2480

CARPETS: Ingrain, 2-ply, Lowell.

[Price per yard on the first of each month.]

Jan....	$0.5760	Apr....	$0.5760	July...	$0.5760	Oct.....	$0.5760
Feb....	.5760	May...	.5760	Aug...	.5760	Nov....	.5760
Mar....	.5760	June...	.5760	Sept...	.5760	Dec.....	.5760
						Average.	$0.5760

CARPETS: Wilton, 5-frame, Bigelow.

[Price per yard on the first of each month.]

Jan.....	$2.2800	Apr....	$2.2800	July...	$2.2800	Oct.....	$2.2800
Feb.....	2.2800	May...	2.2800	Aug...	2.2800	Nov....	2.2800
Mar....	2.2800	June...	2.2800	Sept...	2.2800	Dec.....	2.2800
						Average.	$2.2800

COTTON FLANNELS: 2¾ yards to the pound.

[Price per yard on the first of each month.]

Jan....	$0.09½	Apr....	$0.09½	July...	$0.10¼	Oct.....	$0.10¼
Feb....	.09½	May...	.10	Aug...	.10¼	Nov....	.10
Mar....	.09½	June...	.10	Sept...	.10¼	Dec.....	.10
						Average.	$0.0988

COTTON FLANNELS: 3½ yards to the pound.

[Price per yard on the first of each month.]

Jan.....	$0.07¾	Apr....	$0.07¾	July...	$0.08¼	Oct.....	$0.08¼
Feb.....	.07¾	May...	.08	Aug...	.08¼	Nov....	.08
Mar.....	.07¾	June...	.08	Sept...	.08¼	Dec.....	.08
						Average.	$0.0800

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

COTTON THREAD: 6-cord, 200-yard spools, J. & P. Coats.

[Price per spool, freight paid, on the first of each month.]

Month.	Price.	Month.	Price.	Month	Price.	Month.	Price.
Jan.....	$0.03724	Apr...	$0.03724	July .	$0.01508	Oct.....	$0.04508
Feb.	.03724	May .	.03724	Aug...	01508	Nov....	05408
Mar. ...	03724	June...	.04508	Sept...	.04508	Dec.	.04508
						Average	$0.041813

COTTON YARNS: Carded, white, mule-spun, northern, cones, 10/1.

[Price per pound on the first of each month]

Jan....	$0.22	Apr....	$0.22	July...	$0.23½	Oct.....	$0.22
Feb....	.22	May...	22	Aug.	23½	Nov....	.20
Mar. .	.21½	June...	.23	Sept...	.23	Dec.....	.20
						Average.	$0.2204

COTTON YARNS: Carded, white, mule-spun, northern, cones, 22/1.

[Price per pound on the first of each month]

Jan.....	$0.25	Apr....	$0.25	July .	$0.27½	Oct.....	$0.26
Feb.. .	.25½	May ..	.25	Aug .	27½	Nov ...	.24
Mar.....	.25½	June...	26½	Sept...	.27	Dec. ..	.24
						Average.	$0.2571

DENIMS: Amoskeag.

[Price per yard on the first of each month]

Jan.. ..	$0.12¾	Apr...	$0.13	July ..	$0.14½	Oct.....	$0.14¾
Feb.....	.12¾	May ...	.13	Aug. .	14¾	Nov....	.14½
Mar.....	.13	June...	.14	Sept...	14¼	Dec. .	.14½
						Average.	$0.1381

DRILLINGS: Brown, Pepperell.

[Price per yard on the first of each month]

Jan.....	$0.08¼	Apr .	$0.08¼	July ...	$0.08¼	Oct...	$0.08¼
Feb.....	.08¼	May . .	.08¼	Aug . .	.08¼	Nov. .	.08¼
Mar	.08¼	June...	.08¼	Sept...	.08¼	Dec.....	.08¼
						Average.	$0.0825

DRILLINGS: 30-inch, Stark A.

[Average monthly price per yard]

Jan.....	$0.0729	Apr....	$0.0760	July .	$0.0804	Oct... .	$0.0782
Feb.....	.0768	May .	.0824	Aug .	.0742	Nov. .	.0791
Mar....	.0764	June...	.0787	Sept...	.0812	Dec.. .	.0822
						Average.	$0.0782

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

FLANNELS: White, 4-4, Ballard Vale No. 3.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0.4613	Apr....	$0.4613	July...	$0.4613	Oct....	$0.4687
Feb....	.4613	May....	.4613	Aug....	.4613	Nov....	.4687
Mar....	.4613	June...	.4613	Sept...	.4687	Dec....	.4687
						Average.	$0.4638

GINGHAMS: Amoskeag.

[Price per yard on the first of each month.]

Jan...	$0.06	Apr....	$0.06	July...	$0.07	Oct....	$0.07
Feb....	.06	May....	.06	Aug....	.07½	Nov....	.07
Mar.....	.06	June.	.06	Sept...	.07½	Dec.	.07
						Average.	$0.0658

GINGHAMS: Lancaster.

[Price per yard on the first of each month.]

Jan.....	$0.06½	Apr....	$0.06¾	July...	$0.06¾	Oct....	$0.07¼
Feb.....	.06¾	May....	.06¾	Aug....	.06¾	Nov....	.07¼
Mar....	.06¾	June..	.06¾	Sept...	.07¼	Dec.....	.07¼
						Average.	$0.0690

HORSE BLANKETS: 6 pounds each, all wool.

[Average price per pound.]

Year.	Price.
1907	$0.75

HOSIERY: Men's cotton half hose, seamless, fast black, 20 to 22 ounce, 160 needles, single thread.

[Price per dozen pairs in September. Represents bulk of sales.]

1907	$0.7350

HOSIERY: Men's cotton half hose, seamless, standard quality, 84 needles.

[Price per dozen pairs on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.75	Apr...	$0.75	July...	$0.75	Oct.....	$0.75
Feb.....	.75	May...	.75	Aug...	.75	Nov....	.75
Mar....	.75	June..	.75	Sept...	.75	Dec....	.75
						Average.	$0.75

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

HOSIERY: Women's combed Egyptian cotton hose, high spliced heel, double sole, full-fashioned.

[Price per dozen pairs maintained throughout the year.]

Year.	Price.
1907	$2.02½

HOSIERY: Women's cotton hose, seamless, fast black, 26 to 28 ounce, 160 to 176 needles.

[Price per dozen pairs in September. Represents bulk of sales.]

1907	$0.8330

LEATHER: Harness, oak, packers' hides, heavy, No. 1.

[Price per pound on the first of each month in the general market, quotations from the Shoe and Leather Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan	$0.37-$0.39	Apr	$0.37-$0.39	July	$0.36-$0.38	Oct	$0.36-$0.38
Feb	.37- .39	May	.37- .39	Aug	.36- .38	Nov	.36- .38
Mar	.37- .39	June	.36- .38	Sept	.36- .38	Dec	.36- .37
						Average	$0.3738

LEATHER: Sole, hemlock, Buenos Aires and Montana, middle weights, first quality.

[Price per pound on the first of each month in the general market, quotations from the Shoe and Leather Reporter.]

Jan	$0.26-$0.26½	Apr	$0.26-$0.27	July	$0.26-$0.27	Oct	$0.26-$0.27
Feb	.26- .26½	May	.26- .27	Aug	.26- .27	Nov	.26- .27
Mar	.26- .26½	June	.26- .27	Sept	.26- .27	Dec	.26- .27
						Average	$0.2644

LEATHER: Sole, oak, scoured backs, heavy, No. 1.

[Price per pound on the first of each month in the general market, quotations from the Shoe and Leather Reporter.]

Jan	$0.40-$0.41	Apr	$0.37-$0.38	July	$0.36-$0.37	Oct	$0.38-$0.41
Feb	.38- .39	May	.37- .38	Aug	.38	Nov	.38- .40
Mar	.37- .38	June	.37- .38	Sept	.38	Dec	.37- .40
						Average.	$0.3821

LEATHER: Wax calf, 30 to 40 pounds to the dozen, B grade.

[Price per square foot on the first of each month in the general market; quotations from the Shoe and Leather Reporter.]

Jan	$0.70-$0.75	Apr	$0.75-$0.80	July	$0.75-$0.80	Oct	$0.75-$0.80
Feb	.70- .75	May	.75- .80	Aug	.75- .80	Nov	.75- .80
Mar	.75- .80	June	.75- .80	Sept	.75- .80	Dec	.75- .80
						Average.	$0.7667

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

LINEN SHOE THREAD: 10s, Barbour.

[Price per pound on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.8930	Apr....	$0.8930	July..	$0.8930	Oct....	$0.8930
Feb..	.8930	May...	.8930	Aug..	.8930	Nov..	.8930
Mar....	.8930	June..	.8930	Sept...	.8930	Dec.	.8930
						Average.	$0.8930

LINEN THREAD: 3-cord, 200-yard spools, Barbour.

[Price per dozen spools on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.8835	Apr..	$0.8835	July.	$0.9300	Oct....	$0.9300
Feb..	.8835	May.	.9300	Aug...	.9300	Nov....	.9300
Mar..	.8835	June.	.9300	Sept...	.9300	Dec.....	.9300
						Average.	$0.9145

OVERCOATINGS: Chinchilla, B-rough, all wool.

[Price per yard maintained generally throughout the year. Represents bulk of sales.]

Year.	Price.
1907	$2.5575

OVERCOATINGS: Chinchilla, cotton warp, C. C. grade.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.49	Apr..	$0.49½	July...	$0.50½	Oct.....	$0.50
Feb.....	.49½	May.	.50	Aug...	.49	Nov....	.48
Mar..	.49½	June.	.49	Sept...	.49	Dec.....	.46
						Average.	$0.4908

OVERCOATINGS: Covert cloth, light weight, staple goods.

[Price per yard maintained throughout the year.]

Year.	Price.
1907	$2.2568

OVERCOATINGS: Kersey, standard, 27 to 28 ounce.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$1.92½	Apr...	$1.97½	July...	$1.97½	Oct.....	$1.97½
Feb.....	1.97½	May...	1.97½	Aug...	1.97½	Nov....	1.97½
Mar.....	1.97½	June...	1.97½	Sept...	1.97½	Dec....	1.97½
						Average.	$1.9708

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

PRINT CLOTHS: 28-inch, 64 by 64.

[Average weekly price per yard.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.	$0.0400	Apr.	$0.0450	July	$0.0500	Oct.	$0.0525
	.0400		.0450		.0500		.0525
	.0400		.0450		.0500		.0525
	.0400		.0450		.0512½		.0525
Feb.	.0400	May.	.0450	Aug.	.0525	Nov.	.0525
	.0412½		.0456¼		.0525		.0525
	.0425		.0462½		.0525		a.0525
	.0437½		.0462½		.0525		a.0475
					.0525		a.0475
Mar.	.0450	June.	.0475	Sept.	.0525	Dec.	a.0450
	.0450		.0475		.0525		a.0450
	.0450		.0487½		.0525		a.0437½
	.0450		.0487½		.0525		a.0425
	.0450		.0500				
						Average.	$0.047512

SHAWLS: Standard, all wool (low grade), 72 by 144 inch, 40 to 42 ounce.

[Price per shawl on the first of each month.]

Jan.	$2.04	Apr.	$2.04	July.	$2.04	Oct.	$2.04
Feb.	2.04	May.	2.04	Aug.	2.04	Nov.	2.04
Mar.	2.04	June.	2.04	Sept.	2.04	Dec.	2.04
						Average.	$2.04

SHEETINGS: Bleached, 9-4, Atlantic.

[Average monthly price per yard.]

Jan.	$0.2096	Apr.	$0.2190	July.	$0.2174	Oct.	$0.2495
Feb.	.2310	May.	.2174	Aug.	.2127	Nov.	.2789
Mar.	.2187	June.	.2331	Sept.	.2126	Dec.	.2779
						Average.	$0.2315

SHEETINGS: Bleached, 10-4, Pepperell.

[Price per yard on the first of each month.]

Jan.	$0.26	Apr.	$0.28	July.	$0.30	Oct.	$0.30
Feb.	.26	May.	.28	Aug.	.30	Nov.	.30
Mar.	.28	June.	.30	Sept.	.30	Dec.	.30
						Average.	$0.2883

SHEETINGS: Bleached, 10-4, Wamsutta S. T.

[Price per yard on the first of each month.]

Jan.	$0.29	Apr.	$0.31	July.	$0.31	Oct.	$0.31
Feb.	.29	May.	.31	Aug.	.31	Nov.	.31
Mar.	.29	June.	.31	Sept.	.31	Dec.	.31
						Average.	$0.3050

a Nominal.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

SHEETINGS: Brown, 4-4, Atlantic A.

[Average monthly price per yard.]

Month	Price.	Month	Price.	Month.	Price.	Month.	Price.
Jan...	$0.0751	Apr....	$0.0753	July....	$0.0760	Oct.....	$0.0780
Feb...	.0749	May....	.0750	Aug....	.0772	Nov.....	.0805
Mar...	.0756	June...	.0787	Sept...	.0774	Dec. ..	.0784
						Average.	$0.0768

SHEETINGS: Brown, 4-4, Indian Head.

[Price per yard on the first of each month.]

Jan	$0.08¼	Apr....	$0.08¼	July....	$0.08¼	Oct.....	$0.08½
Feb...	.08¼	May...	.08¼	Aug....	.08¼	Nov.....	.08½
Mar....	.08¼	June.	.08¼	Sept...	.08½	Dec	.08½
						Average.	$0.0835

SHEETINGS: Brown, 4-4, Massachusetts Mills, Flying Horse brand, 2 85/100 yards to the pound.

[Price per yard on the first of each month.]

Jan.....	$0.07½	Apr....	$0.07¾	July....	$0.08	Oct.....	$0.07¾
Feb... .	.07¾	May....	.07¾	Aug.. .	.08	Nov...	.07¾
Mar....	.07¾	June..	.07¾	Sept...	.08	Dec...	.07½
						Average.	$0.0777

SHEETINGS: Brown, 4-4, Pepperell R.

[Price per yard on the first of each month.]

Jan...	$0.07	Apr..	$0.07¼	July....	$0.07½	Oct... .	$0.07¾
Feb..	.07	May...	.07¼	Aug....	.07¾	Nov.. ..	.07¾
Mar.. ..	.07¼	June ..	.07½	Sept...	.07¾	Dec. ..	.07¾
						Average.	$0.0746

SHIRTINGS: Bleached, 4-4, Fruit of the Loom.

[Price per yard on the first of each month.]

Jan ..	$0.09½	Apr....	$0.11	July....	$0.11½	Oct	$0.12
Feb.....	.10	May....	.11	Aug....	.11½	Nov.. ..	.12
Mar.....	.10	June...	.11½	Sept...	.12	Dec.. ..	.12
						Average.	$0.1117

SHIRTINGS: Bleached, 4-4, Hope.

[Price per yard on the first of each month.]

Jan.....	$0.0831	Apr...	$0.0855	July ...	$0.0974	Oct.....	$0.0974
Feb.....	.0855	May. .	.0855	Aug....	.0974	Nov....	.0974
Mar.....	.0855	June ..	.0855	Sept...	.0974	Dec....	.0879
						Average.	$0.0905

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING Continued.

SHIRTINGS: Bleached, 4-4, Lonsdale.

[Price per yard on the first of each month]

Month.	Price.	Month	Price.	Month.	Price.	Month.	Price.
Jan....	$0 09¾	Apr...	$0 09¾	July ...	$0 11	Oct....	$0.11
Feb. ..	.09¾	May...	09½	Aug....	.11	Nov...	.11
Mar.....	.09¾	June	.09½	Sept..	.11	Dec.	a.10
						Average.	$0 1025

SHIRTINGS: Bleached, 4-4, Wamsutta $\overset{\circ}{XX}$.

[Price per yard on the first of each month.]

Jan..	$0 10¾	Apr....	$0.10¾	July ..	$0 11¼	Oct.....	$0 11¼
Feb. ...	10¾	May ..	.10¾	Aug....	.11¼	Nov...	11¼
Mar ...	.10¾	June..	.10¾	Sept...	.11¼	Dec.....	.11¼
						Average.	$0.1100

SHIRTINGS: Bleached, 4-4, Williamsville, A1.

[Price per yard on the first of each month]

Jan.....	$0 10½	Apr..	$0 11½	July .	$0 12	Oct...	$0 12
Feb.....	.10¾	May ..	.11½	Aug....	12	Nov ..	.12
Mar....	.11½	June..	.11¾	Sept...	.12	Dec.....	.12
						Average.	$0.1163

SILK: Raw, Italian, classical.

[Net cash price per pound, in New York, on the first of each month; quotations from the American Silk Journal]

Jan....	$5 2965-$5 3955	Apr....	$5 6430-$5 6925	July ...	$5 6925-$5 8410	Oct. .	$5 7915-$5 8410
Feb...	5 1975- 5 2470	May ...	5 8905- 5.9400	Aug....	5 5935	Nov	5.5935- 5 6430
Mar..	5 3460- 5 3955	June..	5.7915- 5 8410	Sept .	5 7915- 5 8410	Dec....	4.9995- 5 0490
						Average.	$5 5812

SILK: Raw, Japan, filatures, No. 1.

[Net cash price per pound, in New York, on the first of each month, quotations from the American Silk Journal.]

Jan....	$5 0925-$5 1410	Apr....	$5 4320-$5 5290	July ..	$4 9955-$5.0925	Oct....	$4 8500-$4 8985
Feb.....	4 9955- 5 0440	May ...	5 5775- 5 6260	Aug ...	4 7530	Nov	4 7530- 4 8015
Mar.....	5.1895- 5 2380	June...	5 2380- 5.3350	Sept.	5 2865- 5.3350	Dec.....	4.2195- 4.2680
						Average.	$5.0602

SUITINGS: Clay worsted diagonal, 12-ounce, Washington Mills.

[Price per yard on the first of each month]

Jan.....	$1.1700	Apr....	$1.1700	July...	$1.1700	Oct.....	$1.1700
Feb.....	1.1700	May...	1.1700	Aug...	1 1700	Nov....	1.1700
Mar.....	1.1700	June...	1.1700	Sept...	1.1700	Dec.....	1.1700
						Average.	$1.1700

a Nominal.

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

SUITINGS: Clay worsted diagonal, 16-ounce, Washington Mills.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$1.4175	Apr...	$1.4175	July...	$1.3950	Oct.....	$1.3950
Feb...	1.4175	May...	1.3950	Aug...	1.3950	Nov....	1.3950
Mar...	1.4175	June...	1.3950	Sept...	1.3950	Dec...	1.3950
						Average.	$1.4025

SUITINGS: Indigo blue, all wool, 54-inch, 14-ounce, Middlesex standard.

[Price per yard on the first of each month.]

Jan...	$1.7100	Apr...	$1.7100	July...	$1.7100	Oct...	$1.7100
Feb...	1.7100	May...	1.7100	Aug...	1.7100	Nov...	1.7100
Mar...	1.7100	June.	1.7100	Sept...	1.7100	Dec....	1.7100
						Average.	$1.7100

SUITINGS: Indigo blue, all wool, 16-ounce.

[Price per yard maintained generally throughout the year. Represents bulk of sales.]

Year.	Price.
1907..	$2.4180

SUITINGS: Serge, Washington Mills 6700.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$1.0575	Apr..	$1.0575	July...	$1.0125	Oct.....	$1.0575
Feb....	1.0575	May...	1.0575	Aug...	1.0575	Nov....	1.0575
Mar....	1.0575	June..	1.0125	Sept...	1.0575	Dec..	1.0575
						Average.	$1.0500

TICKINGS: Amoskeag A. C. A.

[Price per yard on the first of each month.]

Jan.....	$0.12½	Apr....	$0.13	July...	$0.14	Oct.....	$0.14½
Feb.....	.12¾	May...	.13½	Aug..	.14½	Nov....	.14½
Mar....	.13	June...	.13½	Sept...	.14½	Dec....	.14½
						Average.	$0.1373

TROUSERINGS: Fancy worsted, 21 to 22 ounce, all worsted warp and filling, wool and worsted back.

[Price per yard on the first of each month.]

Jan.....	$2.3625	Apr....	$2.4750	July...	$2.4750	Oct...	$2.4750
Feb.....	2.3625	May...	2.4750	Aug..	2.4750	Nov....	2.4750
Mar.....	2.3625	June...	2.4750	Sept...	2.4750	Dec....	2.4750
						Average.	$2.4469

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Continued.

UNDERWEAR: Shirts and drawers, white, all wool, full-fashioned, 18-gauge.

[Price per dozen garments on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$27.00	Apr.. .	$27.00	July...	$27.00	Oct.....	$27.00
Feb.....	27.00	May...	27.00	Aug...	27.00	Nov....	27.00
Mar.....	27.00	June...	27.00	Sept...	27.00	Dec.....	27.00
						Average.	$27.00

UNDERWEAR: Shirts and drawers, white, merino, full-fashioned, 60 per cent wool, 40 per cent cotton, 24-gauge.

[Price per dozen garments on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$18.00	Apr.. .	$18.00	July...	$18.00	Oct... .	$18.00
Feb. ...	18.00	May..	18.00	Aug...	18.00	Nov....	18.00
Mar....	18.00	June...	18.00	Sept ..	18.00	Dec . .	18.00
						Average.	$18.00

WOMEN'S DRESS GOODS: Cashmere, all wool, 10-11 twill, 38-inch, Atlantic Mills J.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.3920	Apr ...	$0.3920	July...	$0.3920	Oct	$0.3920
Feb.....	.3920	May...	.3920	Aug...	.3920	Nov....	.3920
Mar.....	.3920	June.	.3920	Sept...	.3920	Dec.....	.3920
						Average.	$0.3920

WOMEN'S DRESS GOODS: Cashmere, cotton warp, 9-twill, 4-4, Atlantic Mills F.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.2205	Apr....	$0.2205	July...	$0.2254	Oct.....	$0.2254
Feb.....	.2205	May...	.2205	Aug...	.2254	Nov....	.2254
Mar.. ..	.2205	June...	.2254	Sept...	.2254	Dec. ...	.2254
						Average.	$0.2234

WOMEN'S DRESS GOODS: Cashmere, cotton warp, 36-inch, Hamilton.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.1960	Apr....	$0.1960	July...	$0.1960	Oct.....	$0.1960
Feb.....	.1960	May...	.1960	Aug...	.1960	Nov....	.1960
Mar.....	.1960	June...	.1960	Sept...	.1960	Dec.....	.1960
						Average.	$0.1960

WOMEN'S DRESS GOODS: Danish cloth, cotton warp and worsted filling, 22-inch.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.12½	Apr...	$0.12½	July...	$0.12½	Oct.....	$0.12½
Feb.....	.12½	May...	.12½	Aug...	.12½	Nov....	.12½
Mar....	.12½	June...	.12½	Sept...	.12½	Dec.....	.12½
						Average.	$0.1250

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

CLOTHS AND CLOTHING—Concluded.

WOMEN'S DRESS GOODS: Franklin sackings, 6-4.

[Price per yard on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.66½	Apr...	$0.66½	July...	$0.66½	Oct.....	$0.61¾
Feb....	.66½	May...	.66½	Aug...	.66½	Nov....	.61¾
Mar....	.66½	June..	.66½	Sept...	.66½	Dec....	.61¾
						Average	$0.6531

WOMEN'S DRESS GOODS: Poplar cloth, cotton warp and worsted filling, 36-inch.

[Price per yard on the first of each month.]

Jan.....	$0.19	Apr..	$0.19	July ..	$0.19	Oct...	$0.19
Feb....	.19	May...	.19	Aug...	.19	Nov....	.19
Mar....	.19	June..	.19	Sept...	.19	Dec.....	.20
						Average.	$0.1908

WOOL: Ohio, fine fleece (X and XX grade), scoured.

[Price per pound, in the eastern markets (Baltimore, Boston, New York, and Philadelphia), on the first of each month.]

Jan.....	$0.7021	Apr...	$0.7021	July...	$0.7234	Oct....	$0.7234
Feb....	.7021	May...	.7021	Aug...	.7447	Nov....	.7234
Mar....	.7021	June..	.7234	Sept...	.7447	Dec..	.7234
						Average.	$0.7181

WOOL: Ohio, medium fleece (one-fourth and three-eighths grade), scoured.

[Price per pound, in the eastern markets (Baltimore, Boston, New York, and Philadelphia), on the first of each month.]

Jan....	$0.5270	Apr...	$0.5135	July...	$0.5135	Oct...	$0.5135
Feb....	.5270	May ..	.5135	Aug...	.5135	Nov....	.5135
Mar....	.5135	June...	.5135	Sept...	.5135	Dec.....	.5135
						Average.	$0.5158

WORSTED YARNS: 2-40s, Australian fine.

[Price per pound on the first of each month.]

Jan.....	$1.30	Apr...	$1.30	July...	$1.30	Oct.....	$1.30
Feb.....	1.30	May...	1.30	Aug...	1.30	Nov....	1.28
Mar....	1.30	June...	1.30	Sept...	1.30	Dec.....	1.28
						Average.	$1.2967

WORSTED YARNS: 2-40s, XXXX or its equivalent in quality, white, in skeins.

[Price per pound on the first of each month.]

Jan.....	$1.30	Apr...	$1.30	July ...	$1.28	Oct.....	$1.30
Feb.....	1.30	May ...	1.30	Aug ...	1.28	Nov	1.30
Mar.....	1.30	June..	1.28	Sept...	1.28	Dec.....	1.30
						Average.	$1.2933

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FUEL AND LIGHTING.

CANDLES: Adamantine, 6s, 14-ounce.

[Price per pound, in New York, on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

Month	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.07⅜	Apr....	$0.07⅜	July..	$0.07⅜	Oct....	$0.07½
Feb..	.07⅜	May..	.07⅜	Aug...	.07⅜	Nov...	.07½
Mar....	.07⅜	June...	.07⅜	Sept...	.07⅜	Dec.....	.07½
						Average.	$0.0741

COAL: Anthracite, broken.

[Average monthly selling price per ton, at tide water, New York Harbor.]

Jan.....	$4.2042	Apr..	$4.2007	July..	$4.2066	Oct....	$4.2075
Feb.....	4.2020	May...	4.2015	Aug...	4.2034	Nov...	4.2048
Mar.....	4.2011	June...	4.2049	Sept...	4.2069	Dec....	4.2047
						Average.	$4.2040

COAL: Anthracite, chestnut.

[Average monthly selling price per ton, at tide water, New York Harbor.]

Jan....	$4.9507	Apr..	$4.4504	July..	$4.7442	Oct....	$4.9483
Feb.....	4.9500	May...	4.5334	Aug..	4.8417	Nov..	4.9416
Mar...	4.9509	June...	4.6478	Sept...	4.9403	Dec.....	4.9450
						Average.	$4.8204

COAL: Anthracite, egg.

[Average monthly selling price per ton, at tide water, New York Harbor.]

Jan.....	$4.9512	Apr....	$4.4500	July...	$4.7399	Oct.....	$4.9510
Feb.....	4.9500	May...	4.5265	Aug...	4.8444	Nov....	4.9470
Mar.....	4.9500	June...	4.6434	Sept...	4.9500	Dec..	4.9500
						Average.	$4.8211

COAL: Anthracite, stove.

[Average monthly selling price per ton, at tide water, New York Harbor.]

Jan.....	$4.9502	Apr...	$4.4503	July...	$4.7434	Oct.....	$4.9503
Feb....	4.9501	May...	4.5283	Aug...	4.8433	Nov....	4.9500
Mar.....	4.9521	June...	4.6455	Sept...	4.9438	Dec....	4.9503
						Average.	$4.8215

COAL: Bituminous, Georges Creek.

[Price per ton, at the mine, on the first of each month.]

Jan.....	$1.50	Apr...	$1.50	July...	$1.50	Oct.....	$1.75
Feb.....	1.50	May...	1.50	Aug...	1.50	Nov....	1.75
Mar....	1.50	June...	1.50	Sept...	1.45	Dec.....	1.50
						Average.	$1.5375

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FUEL AND LIGHTING—Continued.

COAL: Bituminous, Georges Creek.

[Price per ton, f. o. b. New York Harbor, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$3.20	Apr...	$3.20	July..	$3.20	Oct....	$3.45
Feb..	3.20	May...	3.20	Aug..	3.20	Nov....	3.45
Mar....	3.20	June..	3.20	Sept...	3.15	Dec...	3.20
						Average.	$3.2375

COAL: Bituminous, Pittsburg (Youghiogheny), lump.

[Price per bushel on Tuesday of each week, Cincinnati, afloat; quotations furnished by the superintendent of the Cincinnati Chamber of Commerce.]

Jan...	$0.08	Apr...	$0.08	July...	$0.08	Oct.....	$0.08½
	.08		.08		.08		.08½
	.08		.08		.08		.08½
	.08		.08		.08		.08½
	.08		.08		.08		.08½
Feb.	.08	May...	.08	Aug...	.08	Nov....	.09
	.08		.08		.08		.09
	.08		.08		.08		.09
	.08		.08		.08		.09
Mar...	.08	June.	.08	Sept...	.08	Dec.....	.09
	.08		.08		.08		.09
	.08		.08		.08½		.09
	.08		.08		.08½		.09
	....		....		....		.09
						Average.	$0.0824

COKE: Connellsville, furnace.

[Contract price per ton, f. o. b. at the ovens, on the first of each month, quotations from the Iron Age.]

Jan...	$3.50-$3.60	Apr...	$2.75-$2.85	July...	$2.40-$2.60	Oct....	$2.90-$3.00
Feb..	3.50- 3.65	May..	2.75- 2.85	Aug...	2.60- 2.65	Nov....	2.75
Mar....	3.25	June..	2.00- 2.05	Sept...	2.75- 2.80	Dec....	2.00
						Average	$2.8250

MATCHES: Parlor, domestic.

[Price per gross of boxes (200s) in New York, on the first of each month, quotations from the Merchants' Review.]

Jan....	$1.50	Apr..	$1.50	July...	$1.50	Oct.....	$1.50
Feb..	1.50	May...	1.50	Aug...	1.50	Nov....	1.50
Mar....	1.50	June..	1.50	Sept...	1.50	Dec....	1.50
						Average.	$1.5000

PETROLEUM: Crude, Pennsylvania.

[Price per barrel, at the wells, on the first of each month; quotations from the Oil City Derrick.]

Jan.....	$1.58	Apr ...	$1.78	July ...	$1.78	Oct	$1.78
Feb.....	1.58	May...	1.78	Aug ...	1.78	Nov.. .	1.78
Mar....	1.63	June..	1.78	Sept...	1.78	Dec.. .	1.78
						Average.	$1.7342

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

FUEL AND LIGHTING—Concluded.

PETROLEUM: Refined, in barrels, cargo lots, for export.

[Price per gallon, New York loading, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan	$0.0750	Apr.	$0.0820	July	$0.0845	Oct.	$0.0845
Feb.	.0775	May	.0820	Aug.	.0845	Nov.	.0875
Mar.	.0775	June.	.0820	Sept.	.0845	Dec	.0875
						Average.	$0.0824

PETROLEUM: Refined, 150° fire test, water white, in barrels, packages included (jobbing lots).

[Price per gallon, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan.	$0.13	Apr.	$0.13½	July.	$0.13½	Oct.	$0.13½
Feb.	.13½	May	.13½	Aug.	.13½	Nov.	.13½
Mar.	.13½	June.	.13½	Sept.	.13½	Dec.	.13½
						Average.	$0.1346

METALS AND IMPLEMENTS.

AUGERS: Extra, ¾-inch.

[Price per auger, in New York, on the first of each month.]

Month	Price.	Month	Price	Month	Price	Month	Price.
Jan.	$0.36	Apr.	$0.36	July	$0.36	Oct.	$0.36
Feb.	.36	May	.36	Aug.	.36	Nov.	.36
Mar.	.36	June	.36	Sept.	.36	Dec.	.36
						Average	$0.3600

AXES: M. C. O., Yankee.

[Price per ax, in New York, on the first of each month.]

Jan.	$0.68	Apr.	$0.68	July	$0.68	Oct.	$0.68
Feb.	.68	May	.68	Aug.	.68	Nov.	.68
Mar.	.68	June	.68	Sept.	.68	Dec.	.68
						Average.	$0.6800

BAR IRON: Best refined, from store.

[Average monthly price per pound, in Philadelphia; quotations from the Bulletin of the American Iron and Steel Association.]

Jan.	$0.0208	Apr.	$0.0216	July	$0.0216	Oct.	$0.0206
Feb.	.0216	May	.0216	Aug.	.0216	Nov.	.0196
Mar.	.0216	June.	.0216	Sept.	.0216	Dec.	.0196
						Average.	$0.0211

BAR IRON: Common to best refined, from mill.

[Price per pound, on the first of each month, f. o. b. Pittsburg, quotations from the Iron Age.]

Jan.	$0.0180–$0.0185	Apr.	$0.0180	July	$0.0170–$0.0175	Oct.	$0.0170
Feb.	.0180	May	.0180	Aug.	.0170– .0175	Nov.	.0170
Mar.	.0180	June	$0.0175– .0180	Sept.	.0170	Dec.	.0160
						Average.	$0.0175

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

METALS AND IMPLEMENTS—Continued.

BARB WIRE: Galvanized.

[Average monthly price per hundred pounds, in Chicago; quotations from the Iron Age.]

Month	Price	Month	Price.	Month	Price.	Month.	Price.
Jan....	$2.60	Apr.	$2.60	July ..	$2.63	Oct....	$2.68
Feb.	2.60	May..	2.60	Aug....	2.63	Nov....	2.68
Mar...	2.60	June.	2.63	Sept....	2.68	Dec....	2.68
						Average	$2.6342

BUTTS: Loose joint, cast, 3 by 3 inch.

[Price per pair, in New York, on the first of each month.]

Jan.....	$0.04	Apr...	$0.04	July...	$0.04	Oct....	$0.04
Feb.....	.04	May...	.04	Aug....	.04	Nov....	.04
Mar.....	.04	June..	.04	Sept....	.04	Dec..	.04
						Average.	$0.04

CHISELS: Extra, socket firmer, 1-inch.

[Price per chisel, in New York, on the first of each month.]

Jan....	$0.450	Apr	$0.450	July..	$0.450	Oct....	$0.450
Feb..	.450	May ..	.450	Aug..	.450	Nov....	.450
Mar..	.450	June..	.450	Sept...	.450	Dec....	.375
						Average.	$0.4438

COPPER: Ingot, lake.

[Price per pound, in New York, on the first of each month; quotations from the Iron Age.]

Jan.....	$0.2350-$0.2425	Apr....	$0.2450-$0.2500	July...	$0.2350-$0.2425	Oct...	$0.1500-$0.1525
Feb.....	.2500- .2525	May...	.2500- .2600	Aug..	.1950- .2050	Nov....	.1450
Mar.....	.2525- .2575	June...	.2425- .2500	Sept...	.1812½	Dec....	.1400
						Average.	$0.2125

COPPER: Sheet, hot-rolled (base sizes).

[Price per pound, in New York, on the first of each month.]

Jan.....	$0.29	Apr....	$0.32	July..	$0.32	Oct.....	$0.20
Feb....	.30	May....	.32	Aug....	.28	Nov....	.20
Mar....	.32	June...	.32	Sept...	.28	Dec.....	.20
						Average.	$0.2792

COPPER WIRE: Bare, No. 8, B. and S. gauge, and heavier (base sizes).

[Price per pound, f. o. b. New York, on the first of each month.]

Jan. ...	$0.25¾	Apr....	$0.27½	July...	$0.27½	Oct.....	$0.16¼
Feb.....	.27½	May....	.27½	Aug....	.24½	Nov....	.16
Mar....	.27½	June...	.27½	Sept...	.24½	Dec.....	.16¼
						Average.	$0.2402

DOORKNOBS: Steel, bronze plated.

[Price per pair, in New York, on the first of each month.]

Jan.....	$0.45	Apr....	$0.45	July...	$0.45	Oct.....	$0.45
Feb.....	.45	May...	.45	Aug....	.45	Nov....	.45
Mar.....	.45	June..	.45	Sept...	.45	Dec.....	.45
						Average.	$0.4500

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

METALS AND IMPLEMENTS—Continued.

FILES: 8-inch mill bastard, Nicholson.

[Price per dozen on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$1.01	Apr..	$1.00	July...	$1.00	Oct...	$0.99
Feb...	1.01	May...	1.00	Aug...	1.00	Nov...	.98
Mar...	1.01	June.	1.00	Sept...	.99	Dec..	.98
						Average.	$0.9975

HAMMERS: Maydole No. 1½.

[Price per hammer, in New York, on the first of each month.]

Jan.....	$0.466	Apr...	$0.466	July...	$0.466	Oct.....	$0.466
Feb.....	.466	May...	.466	Aug...	.466	Nov....	.466
Mar....	.466	June.	.466	Sept...	.466	Dec....	.466
						Average.	$0.466

LEAD: Pig, desilverized.

[Price per pound, in New York, from store, on the first of each month; quotations from the Iron Age.]

Jan....	$0.0630	Apr...	$0.0620-$0.0625	July...	$0.0525	Oct.....	$0.0468
Feb.....	$0.0630-.0635	May...	.0610	Aug...	.0515	Nov...	.0460
Mar....	.0635-.0640	June..	.0575-.0580	Sept...	.0520	Dec....	.0425
						Average.	$0.0552

LEAD PIPE.

[Price per hundred pounds, f. o. b. New York, on the first of each month.]

Jan....	$7.20	Apr...	$7.20	July...	$6.84	Oct.....	$6.12
Feb..	7.20	May...	7.20	Aug...	6.48	Nov....	6.12
Mar.....	7.20	June...	6.84	Sept...	6.48	Dec...	5.58
						Average.	$6.7050

LOCKS: Common mortise.

[Price per lock, in New York, on the first of each month.]

Jan...	$0.20	Apr..	$0.20	July...	$0.20	Oct...	$0.20
Feb.	.20	May....	.20	Aug....	.20	Nov.....	.20
Mar..	.20	June...	.20	Sept...	.20	Dec....	.20
						Average.	$0.2000

NAILS: Cut, 8-penny, fence and common.

[Price per 100-pound keg, f. o. b. Pittsburg, on the first of each month; quotations computed from base prices published in the Iron Age.]

Jan.....	$2.15	Apr....	$2.15	July....	$2.15	Oct....	$2.20
Feb.....	2.15	May....	2.15	Aug....	2.20	Nov.....	$2.10-2.15
Mar.....	2.15	June...	2.15	Sept..	2.25	Dec.....	2.10-2.15
						Average.	$2.1625

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

METALS AND IMPLEMENTS—Continued.

NAILS: Wire, 8-penny, fence and common.

[Price per 100-pound keg, f. o. b. Pittsburg, on the first of each month, quotations computed from base prices published in the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$2 10	Apr....	$2 10	July....	$2 10	Oct....	$2 15
Feb....	2 10	May....	2 10	Aug....	2 10	Nov....	2 15
Mar..	2 10	June..	2 10	Sept....	2 15	Dec. .	2.15
						Average.	$2 1167

PIG IRON: Bessemer.

[Average monthly price per ton in Pittsburg, quotations from the Bulletin of the American Iron and Steel Association.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$23 35	Apr....	$23 55	July....	$23 80	Oct....	$22 90
Feb....	23 25	May....	21 05	Aug. .	22 95	Nov....	20 35
Mar.....	22 95	June.	24 50	Sept....	22 85	Dec. ..	19 60
						Average.	$22 8417

PIG IRON: Foundry No. 1.

[Average monthly price per ton in Philadelphia, quotations from the Bulletin of the American Iron and Steel Association.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$27 50	Apr.. .	$26 56	July....	$23 62	Oct....	$20 40
Feb ..	27 37	May....	26 60	Aug	22 50	Nov...	19 44
Mar....	26 87	June.	25 75	Sept....	21 19	Dec. . .	18 94
						Average.	$23 8950

PIG IRON: Foundry No. 2, northern.

[Price per ton, f. o. b. Pittsburg, on the first of each month, quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$25 35-$25 85	Apr..	$25 10	July....	$25 90	Oct....	$20 40-$22 15
Feb. .	25 35- 25 85	May....	$24 85- 25 85	Aug.. .	23 90	Nov..	19 90- 20 40
Mar....	24 85	June .	26 40- 26 90	Sept....	$22 40- 23 40	Dec . .	18 90- 19 40
						Average.	$23.8688

PIG IRON: Gray forge, southern, coke.

[Price per ton, f. o. b. Cincinnati, on the first of each month, quotations from the Iron Age.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$23 00-$23 50	Apr.. .	$23 00-$23 50	July	$21 75-$22 25	Oct....	$18.75-$19.25
Feb. ...	23 00- 23 50	May	21 75- 22 25	Aug. . .	20 75- 21 25	Nov.....	17.50- 18.00
Mar.....	22 35- 22 85	June.	21.75- 22 25	Sept...	19 00- 19 50	Dec.....	16.25- 16.75
						Average.	$20 9875

PLANES: Bailey No. 5.

[Price per plane, in New York, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$1 53	Apr....	$1.53	July ..	$1.53	Oct.....	$1.53
Feb.....	1 53	May ...	1 53	Aug ...	1.53	Nov.....	1.53
Mar.....	1.53	June...	1.53	Sept...	1 53	Dec.....	1.53
						Average.	$1.53

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

METALS AND IMPLEMENTS—Continued.

QUICKSILVER.

[Price per pound, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan	$0.54	Apr	$0.53	July	$0.51½	Oct	$0.54
Feb	.54	May	.53	Aug	.51½	Nov	.61
Mar	.54	June	.53	Sept	.51½	Dec	.61
						Average	$0.5429

SAWS: Crosscut, Disston No. 2, 6-foot.

[Price per saw to small jobbers, f. o. b. Philadelphia, on the first of each month.]

Jan	$1.6038	Apr	$1.6038	July	$1.6038	Oct	$1.6038
Feb	1.6038	May	1.6038	Aug	1.6038	Nov	1.6038
Mar	1.6038	June	1.6038	Sept	1.6038	Dec	1.6038
						Average	$1.6038

SAWS: Hand, Disston No. 7, 26-inch.

[Price per dozen to small jobbers, f. o. b. Philadelphia, on the first of each month.]

Jan	$12.9500	Apr	$12.9500	July	$12.9500	Oct	$12.9500
Feb	12.9500	May	12.9500	Aug	12.9500	Nov	12.9500
Mar	12.9500	June	12.9500	Sept	12.9500	Dec	12.9500
						Average	$12.9500

SHOVELS: Ames No. 2, cast steel, D handle, square point, back strap, black.

[Price per dozen on the first of each month.]

Jan	$7.84	Apr	$7.84	July	$7.84	Oct	$7.84
Feb	7.84	May	7.84	Aug	7.84	Nov	7.84
Mar	7.84	June	7.84	Sept	7.84	Dec	7.84
						Average	$7.84

SILVER: Bar, fine.

[Average monthly price, in New York; quotations furnished by the Director of the Mint.]

Jan	$0.69333	Apr	$0.66062	July	$0.68759	Oct	$0.63111
Feb	.69437	May	.66648	Aug	.69415	Nov	.59403
Mar	.68110	June	.67820	Sept	.68430	Dec	.55215
						Average	$0.65979

SPELTER: Western.

[Price per pound, in New York, on the first of each month; quotations from the Iron Age.]

Jan	$0.0665-$0.0670	Apr	$0.0685-$0.0690	July	$0.0635-$0.0640	Oct	$0.0540
Feb	.0700- .0725	May	.0660- .0665	Aug	.0580- .0590	Nov	.0550
Mar	.0695	June	.0650	Sept	.0550- .0555	Dec	$0.0460- .0465
						Average	$0.0617

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

METALS AND IMPLEMENTS—Continued.

STEEL BILLETS.

[Average monthly price per ton, at mills at Pittsburg; quotations from the Bulletin of the American Iron and Steel Association.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$29.40	Apr...	$30.25	July...	$30.00	Oct.....	$28.20
Feb..	29.50	May..	30.30	Aug...	29.40	Nov....	28.00
Mar...	29.00	June.	29.62	Sept...	29.37	Dec ...	28.00
						Average	$29.2533

STEEL RAILS.

[Average monthly price per ton, at mills in Pennsylvania; quotations from the Bulletin of the American Iron and Steel Association.]

Jan.....	$28.00	Apr...	$28.00	July...	$28.00	Oct....	$28.00
Feb. ..	28.00	May.	28.00	Aug..	28.00	Nov....	28.00
Mar..	28.00	June.	28.00	Sept...	28.00	Dec..	28.00
						Average.	$28.00

STEEL SHEETS: Black, No. 27, box annealed, one pass through cold rolls.

[Price per pound, in Pittsburg, on the first of each month; quotations from the Iron Age.]

Jan...	$0.0250	Apr...	$0.0250	July...	$0.0250	Oct....	$0.0250
Feb. .	.0250	May...	.0250	Aug.	.0250	Nov...	.0250
Mar....	.0250	June...	.0250	Sept...	.0250	Dec. ..	.0250
						Average.	$0.0250

TIN: Pig.

[Price per pound, in New York, on the first of each month; quotations from the Iron Age.]

Jan...	$0.4185	Apr...	$0.4000	July...	$0.4275–$0.4300	Oct...	$0.3470
Feb.....	.4250	May..	.4305	Aug..	.3860– .3900	Nov...	.3060
Mar....	.4190	June..	.4150	Sept...	.3712½	Dec....	.3010
						Average.	$0.3875

TIN PLATES: Domestic, Bessemer, coke, 14 by 20 inch.

[Price per 100 pounds, in New York, on the first of each month; quotations from the Iron Age.]

Jan.....	$4.09	Apr....	$4.09	July...	$4.09	Oct.....	$4.09
Feb.....	4.09	May...	4.09	Aug...	4.09	Nov....	4.09
Mar.....	4.09	June...	4.09	Sept...	4.09	Dec.....	4.09
						Average.	$4.0900

TROWELS: M. C. O., brick, 10½-inch.

[Price per trowel, in New York, on the first of each month.]

Jan.....	$0.34	Apr....	$0.34	July...	$0.34	Oct.....	$0.34
Feb.....	.34	May...	.34	Aug...	.34	Nov....	.34
Mar.....	.34	June..	.34	Sept...	.34	Dec.....	.34
						Average.	$0.34

INDUSTRIES
Beng 885

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Concluded.

METALS AND IMPLEMENTS—Concluded.

VISES: Solid box, 50-pound.

[Price per vise, in New York, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$5.75	Apr..	$5.75	July...	$5.75	Oct.....	$5.75
Feb.....	5.75	May...	5.75	Aug...	5.75	Nov.....	5.75
Mar.....	5.75	June..	5.75	Sept...	5.75	Dec...	5.75
						Average.	$5.7500

WOOD SCREWS: 1-inch, No. 10, flat head.

[Price per gross, in New York, on the first of each month.]

Jan.....	$0.1219	Apr..	$0.1219	July ..	$0.1219	Oct.....	$0.1219
Feb....	.1219	May...	.1219	Aug...	.1219	Nov....	.1219
Mar.....	.1219	June..	.1219	Sept...	.1219	Dec...	.1219
						Average.	$0.1219

ZINC: Sheet, ordinary numbers and sizes, packed in 600-pound casks.

[Price per hundred pounds, f. o. b. La Salle, Ill., on the first of each month.]

Jan.....	$7.59	Apr....	$7.91	July...	$7.91	Oct...	$6.90
Feb.....	7.73	May...	7.91	Aug...	7.68	Nov....	6.90
Mar.....	7.82	June...	7.91	Sept...	7.13	Dec.....	6.44
						Average.	$7.4858

LUMBER AND BUILDING MATERIALS.

BRICK: Common domestic building.

[Price per thousand, on dock in New York, from the first to the last of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$6.00-$6.50	Apr. ..	$5.00-$5.50	July...	$6.25-$6.75	Oct....	$5.50-$6.25
Feb.....	6.00- 6.75	May...	5.50- 6.25	Aug...	6.00- 7.00	Nov....	5.50- 6.00
Mar.....	6.00- 6.75	June.	7.25- 7.75	Sept...	5.75- 6.50	Dec....	5.25- 5.75
						Average	$6.1563

CARBONATE OF LEAD: American, in oil.

[Price per pound, in New York, on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

Jan.....	$0.0735	Apr....	$0.0711	July ..	$0.0711	Oct....	$0.0662
Feb.....	.0686	May ...	.0711	Aug ..	.0711	Nov.....	.0662
Mar.....	.0686	June...	.0711	Sept...	.0711	Dec ..	.0662
						Average.	$0.0697

CEMENT: Portland, domestic.

[Price per barrel, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$1.60-$1.70	Apr....	$1.60-$1.70	July ...	$1.60-$1.70	Oct.....	$1.70
Feb.....	1.60- 1.70	May ...	1.60- 1.70	Aug ...	1.70	Nov...	1.55
Mar.....	1.60- 1.70	June...	1.60- 1.70	Sept...	1.70	Dec...	1.55
						Average.	$1.6458

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

LUMBER AND BUILDING MATERIALS—Continued.

CEMENT: Rosendale.

[Price per barrel, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0 95	Apr....	$0 95	July ..	$0 95	Oct.....	$0 95
Feb..	95	May ..	.95	Aug .	95	Nov.....	95
Mar.	.95	June..	95	Sept..	95	Dec. .	95
						Average.	$0 9500

DOORS: Western white pine, 2 feet 8 inches by 6 feet 8 inches, 1⅜ inches thick, 5-panel, No. 1, O. G.

[Price per door, in Buffalo, on the first of each month.]

Jan....	$1 89	Apr...	$1 89	July .	$1 89	Oct...	$1 95
Feb...	1 89	May .	1 89	Aug .	1 89	Nov...	1.95
Mar.. .	1 89	June.	1 89	Sept...	1.89	Dec... .	1.70
						Average	$1 8842

HEMLOCK: 2 by 4 inch, 12 to 14 feet long, Pennsylvania stock.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal.]

Jan..	$22 00-$22 50	Apr..	$22 00-$22 50	July ..	$22 00-$22 50	Oct...	$22 00-$22 50
Feb. .	22 00- 22 50	May .	22 00- 22 50	Aug ..	22 00- 22 50	Nov...	22 00- 22 50
Mar. .	22 00- 22 50	June.	22 00- 22 50	Sept...	22 00- 22 50	Dec....	22 00- 22 50
						Average	$22 2500

LIME: Eastern, common.

[Price per barrel, in New York, on the first of each month; quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan ..	$1 02	Apr..	$1 02	July .	$0 87-$0 92	Oct... .	$0 87-$0 92
Feb. . .	1 02	May .	$0 87- .92	Aug ..	87- 92	Nov...	87- 92
Mar... .	1 02	June. .	87- .92	Sept...	.87- .92	Dec....	1 02- 1 07
						Average.	$0 9492

LINSEED OIL: Raw, city, in barrels.

[Price per gallon, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan...	$0 41	Apr..	$0 41	July...	$0.45	Oct...	$0.47
Feb.	.41	May...	.41	Aug...	.43	Nov....	.49
Mar.	.41	June.	.44	Sept...	.43	Dec.	.45
						Average.	$0 4342

MAPLE: Hard, 1-inch, firsts and seconds, 6 inches and up wide.

[Price per M feet, in New York, on the first of each month; quotations from the New York Lumber Trade Journal.]

Jan.....	$30.00-$32 00	Apr....	$32.00-$33 00	July...	$32.00-$33 00	Oct... .	$32.00-$33.00
Feb.....	30 00- 32.00	May...	32 00- 33 00	Aug...	32.00- 33.00	Nov....	32.00- 33.00
Mar.....	32 00- 33 00	June...	32 00- 33 00	Sept...	32.00- 33.00	Dec.....	32.00- 33.00
						Average.	$32.2500

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

LUMBER AND BUILDING MATERIALS—Continued.

OAK: White, plain, 1-inch, 6 inches and up wide.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal.]

Month.	Price.	Month.	Price.	Month	Price.	Month.	Price.
Jan...	$50 00-$52 00	Apr..	$54 00-$56 00	July...	$55 00-$60 00	Oct...	$53 00-$55 00
Feb.	52 00- 54 00	May...	58 00- 65.00	Aug.	55 00- 57 00	Nov....	53 00- 55 00
Mar.	54 00- 56 00	June.	55.00- 60.00	Sept...	53.00- 55 00	Dec.	53 00- 55.00
						Average.	$55 2083

OAK: White, quartered, clear and good seconds, 1-inch, 6 inches and up wide, 10 to 16 feet long.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal.]

Jan...	$78 00-$82 00	Apr..	$78 00-$82 00	July...	$78 00-$82 00	Oct...	$78 00-$82.00
Feb.	78 00- 82 00	May...	78 00- 82 00	Aug...	78 00- 82 00	Nov....	78 00- 82.00
Mar.	78 00- 82 00	June.	78 00- 82 00	Sept...	78 00- 82 00	Dec.	78 00- 82 00
						Average.	$80.0000

OXIDE OF ZINC: American, extra dry.

[Price per pound on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan...	$0 05⅜	Apr..	$0 05⅜	July...	$0 05⅜	Oct...	$0 05⅜
Feb.	05⅜	May...	05⅜	Aug..	05⅜	Nov....	.05⅜
Mar.	05⅜	June.	.05⅜	Sept...	.05⅜	Dec.	.05⅜
						Average	$0.0538

PINE: White, boards, No. 2 barn, 1 inch by 10 inches wide, rough.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal.]

Jan...	$36 50-$37 00	Apr..	$36 50-$37.00	July..	$37 50-$38 00	Oct..	$37 50-$38 00
Feb.	36 50- 37 00	May...	37 50- 38 00	Aug...	37 50- 38 00	Nov....	37 50- 38 00
Mar.	36 50- 37 00	June.	37 50- 38 00	Sept...	37 50- 38 00	Dec.	37 50- 38.00
						Average	$37.4167

PINE: White, boards, uppers, 1-inch, 8 inches and up wide, rough.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal.]

Jan.....	$93 50-$95 50	Apr....	$95 50-$97.50	July...	$96 50-$98 50	Oct...	$97 50-$99 50
Feb....	93 50- 95 50	May...	96 50- 98 50	Aug...	96 50- 98 50	Nov...	97.50- 99.50
Mar....	95.50- 97.50	June..	96 50- 98 50	Sept..	96.50- 98 50	Dec..	97.50- 99.50
						Average	$97.0833

PINE: Yellow, long leaf, boards, heart-face sidings, 1-inch and 1¼-inch.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal.]

Jan.....	$30.00-$31.00	Apr....	$30 00-$31.00	July...	$30 00-$31.00	Oct...	$30 00-$31.00
Feb.....	30.00- 31.00	May...	30.00- 31.00	Aug...	30 00- 31 00	Nov....	30 00- 31.00
Mar....	30.00- 31.00	June...	30.00- 31.00	Sept...	30 00- 31.00	Dec.....	30.00- 31.00
						Average.	$30.5000

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

LUMBER AND BUILDING MATERIALS—Continued.

PLATE GLASS: Polished, glazing, area 3 to 5 square feet.

[Price per square foot, f. o. b. New York, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.23	Apr..	$0.23	July...	$0.23	Oct.....	$0.23
Feb...	.23	May...	.23	Aug...	.23	Nov....	.23
Mar....	.23	June...	.23	Sept...	.23	Dec.	.23
						Average.	$0.2300

PLATE GLASS: Polished, glazing, area 5 to 10 square feet.

[Price per square foot, f. o. b. New York, on the first of each month.]

Jan...	$0.34	Apr...	$0.34	July..	$0.34	Oct....	$0.34
Feb...	.34	May...	.34	Aug...	.34	Nov....	.34
Mar....	.34	June.	.34	Sept...	.34	Dec....	.34
						Average.	$0.3400

POPLAR: Yellow, 1-inch, 8 inches and up wide, firsts and seconds, rough.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal.]

Jan.....	$52.00-$55.00	Apr..	$56.00-$60.00	July...	$55.00-$60.00	Oct....	$57.00-$62.00
Feb...	52.00- 55.00	May..	58.00- 65.00	Aug...	57.00- 62.00	Nov...	57.00- 62.00
Mar....	56.00- 60.00	June..	55.00- 60.00	Sept...	57.00- 62.00	Dec....	57.00- 62.00
						Average.	$58.0833

PUTTY: Bulk.

[Price per pound, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan.....	$0.0120	Apr....	$0.0120	July...	$0.0120	Oct....	$0.0120
Feb....	.0120	May...	.0120	Aug...	.0120	Nov....	.0120
Mar....	.0120	June...	.0120	Sept..	.0120	Dec.....	.0120
						Average.	$0.0120

RESIN: Common to good, strained.

[Price per barrel, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$4.25	Apr....	$4.50-$4.60	July...	$4.40-$4.45	Oct....	$4.20-$4.25
Feb....	4.45	May...	4.80	Aug...	4.50	Nov....	4.20
Mar.....	$4.40- 4.45	June...	4.80	Sept...	4.35	Dec.....	3.55
						Average.	$4.3771

SHINGLES: Cypress, all heart, 5 and 6 inches wide, 16 inches long.

[Price per M, f. o. b. mills, on the first of each month.]

Jan.....	$3.85	Apr....	$4.35	July...	$4.35	Oct.....	$4.35
Feb.....	3.85	May...	4.35	Aug...	4.35	Nov....	4.10
Mar.....	4.35	June...	4.35	Sept...	4.35	Dec.....	4.10
						Average.	$4.2250

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

LUMBER AND BUILDING MATERIALS—Concluded.

SHINGLES; Red cedar, clears, random width, 16 inches long.

[Average monthly price at the mills in Washington]

Month.	Price.	Month.	Price	Month	Price.	Month.	Price.
Jan.....	$2 50	Apr...	$2 90	July ..	$3 00	Oct....	$2 75
Feb...	2.75	May...	3 00	Aug...	3 10	Nov....	2.00
Mar.....	2 75	June...	2 60	Sept..	3 00	Dec. .	2.00
						Average.	$2.6958

SPRUCE: 6 to 9 inch, cargoes.

[Price per M feet, in New York, on the first of each month, quotations from the New York Lumber Trade Journal]

Jan.....	$22 00-$28 00	Apr.	$22 00-$28 00	July .	$22 00-$28 00	Oct... .	$20 00-$22.00
Feb.....	22 00- 28 00	May..	22 00- 28 00	Aug...	22 00- 28 00	Nov....	20 00- 22 00
Mar.....	22 00- 28 00	June.	22 00- 28 00	Sept...	22.00- 28.00	Dec. .	20 00- 22 00
						Average	$24.0000

TAR.

[Price per barrel, in Wilmington N C., on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin]

Jan.....	$2 35	Apr .	$2 80	July. .	$2 50	Oct.....	$2 30
Feb.....	2 30	May...	2 30	Aug...	2 50	Nov. ..	2.30
Mar.....	2 30	June..	2 40	Sept...	2 30	Dec.	1.60
						Average.	$2.3202

TURPENTINE: Spirits of, in machine barrels.

[Price per gallon, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin]

Jan.....	$0.71	Apr....	$0.73	July...	$0.61	Oct.....	$0.55
Feb.....	.74	May.	.67½	Aug...	.59	Nov....	.54
Mar.....	.75½	June...	.64	Sept...	$0 58- .58½	Dec.....	.49
						Average.	$0.6344

WINDOW GLASS: American, single, firsts, 25-inch bracket (6 by 8 to 10 by 15 inch).

[Price per 50 square feet, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter]

Jan... .	$2 88	Apr....	$2 88	July...	$2 88	Oct....	$2 72
Feb.. ..	2 88	May...	2.88	Aug...	2.72	Nov....	2.72
Mar... .	2.88	June...	2.88	Sept. .	2.72	Dec.. .	2.72
						Average.	$2.8133

WINDOW GLASS: American, single, thirds, 25-inch bracket (6 by 8 to 10 by 15 inch).

[Price per 50 square feet, in New York, on the first of each month; quotations from the Oil, Paint, and Drug Reporter]

Jan.....	$2.2950	Apr....	$2.2950	July...	$2.2950	Oct.....	$2.1675
Feb.....	2.2950	May...	2.2950	Aug...	2.1675	Nov.. .	2 1675
Mar.....	2.2950	June...	2.2950	Sept...	2.1675	Dec.....	2.1675
						Average.	$2.2419

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

DRUGS AND CHEMICALS.

ALCOHOL: Grain.

[Price per gallon, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$2 46½	Apr....	$2 46½	July...	$2.53	Oct....	$2.59
Feb....	2 46½	May...	2 46½	Aug....	2 53	Nov....	2 61
Mar....	2 46½	June.	2 53	Sept....	2.53	Dec....	2 63
						Average.	$2 5229

ALCOHOL: Wood, refined, 95 per cent.

[Price per gallon, in New York, on the first of each month; quotations from the Oil, Paint and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0 40	Apr...	$0 40	July...	$0 40	Oct.....	$0 40
Feb....	.40	May...	.40	Aug....	.40	Nov....	.40
Mar....	.40	June.	.40	Sept...	.40	Dec....	.39
						Average.	$0 3992

ALUM: Lump.

[Price per pound, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$0 0175	Apr...	$0 0175	July...	$0 0175	Oct.....	$0 0175
Feb....	.0175	May...	.0175	Aug...	.0175	Nov....	.0175
Mar...	.0175	June...	.0175	Sept...	.0175	Dec.....	.0175
						Average.	$0 0175

BRIMSTONE: Crude, seconds.

[Price per ton, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$22 50	Apr..	$22 12½	July.	$22 12½	Oct.....	$19.50
Feb...	22 12½	May...	22 12½	Aug..	22 12½	Nov...	19.50
Mar.....	22 12½	June...	22 12½	Sept...	22 12½	Dec...	19 50
						Average.	$21 4983

GLYCERIN: Refined, chemically pure, in bulk.

[Price per pound, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan...	$0.11¾	Apr....	$0.13	July...	$0 13¾	Oct	$0.15½
Feb....	.12	May...	.13¼	Aug...	.14¼	Nov....	.15¾
Mar	.13	June..	.13½	Sept...	.14¼	Dec....	.16
						Average.	$0.1383

MURIATIC ACID: 20°.

[Price per pound, in New York, on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.0135	Apr..	$0.0135	July...	$0.0135	Oct....	$0.0135
Feb....	.0135	May...	.0135	Aug...	.0135	Nov....	.0135
Mar.....	.0135	June.	.0135	Sept...	.0135	Dec.....	.0135
						Average.	$0.0135

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

DRUGS AND CHEMICALS—Concluded.

OPIUM: Natural, in cases.

[Price per pound, in New York, on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$3.55	Apr..	$4.00	July...	$4.75	Oct...	$6.50
Feb....	3.55	May...	4.00	Aug...	7.00	Nov...	6.25
Mar.....	3.45	June.	3.80	Sept...	7.00	Dec.	5.50
						Average.	$4.9458

QUININE: American, in 100-ounce tins.

[Price per ounce, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan.....	$0.19	Apr..	$0.19	July..	$0.16	Oct	$0.16
Feb.....	.22	May...	.18	Aug...	.16	Nov....	.16
Mar.....	.21	June..	.18	Sept...	.16	Dec...	.16
						Average	$0.1775

SULPHURIC ACID: 66°.

[Price per pound, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan...	$0.0100	Apr..	$0.0100	July..	$0.0100	Oct...	$0.0100
Feb....	.0100	May...	.0100	Aug...	.0100	Nov...	.0100
Mar.....	.0100	June...	.0100	Sept...	.0100	Dec...	.0100
						Average.	$0.0100

HOUSE FURNISHING GOODS.

EARTHENWARE: Plates, cream-colored, 7-inch.

[Price per dozen, f. o. b. Trenton, N. J., on the first of each month.]

Month.	Price.	Month	Price.	Month.	Price	Month.	Price.
Jan.....	$0.4410	Apr..	$0.4410	July...	$0.4410	Oct...	$0.4410
Feb....	.4410	May...	.4410	Aug...	.4410	Nov...	.4410
Mar.....	.4410	June...	.4410	Sept...	.4410	Dec...	.4410
						Average.	$0.4410

EARTHENWARE: Plates, white granite, 7-inch.

[Price per dozen, f. o. b. Trenton, N. J., on the first of each month.]

Jan.....	$0.4586	Apr....	$0.4586	July...	$0.4586	Oct.....	$0.4586
Feb.....	.4586	May....	.4586	Aug...	.4586	Nov....	.4586
Mar.....	.4586	June...	.4586	Sept...	.4586	Dec.....	.4586
						Average.	$0.4586

EARTHENWARE: Teacups and saucers, white granite, with handles.

[Price per gross (6 dozen cups and 6 dozen saucers), f. o. b. Trenton, N. J., on the first of each month.]

Jan.....	$3.3869	Apr....	$3.3869	July....	$3.3869	Oct.....	$3.3869
Feb.....	3.3869	May....	3.3869	Aug...	3.3869	Nov.....	3.3869
Mar.....	3.3869	June...	3.3869	Sept...	3.3869	Dec....	3.3869
						Average.	$3.3869

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

HOUSE FURNISHING GOODS—Continued.

FURNITURE: Bedroom sets, ash, 3 pieces, bedstead, bureau, and washstand.

[Price per set, in New York, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan....	$14 50	Apr....	$14 50	July....	$14 50	Oct.....	$14 50
Feb.....	14 50	May...	14 50	Aug....	14 50	Nov.....	14 50
Mar.....	14 50	June...	14 50	Sept...	14 50	Dec.....	14 50
						Average	$14.5000

FURNITURE: Chairs, bedroom, maple, cane seat.

[Price per dozen, in New York, on the first of each month.]

Jan.....	$10 00	Apr...	$10 00	July....	$10 00	Oct....	$10 00
Feb....	10 00	May	10 00	Aug....	10 00	Nov..	10 00
Mar..	10 00	June..	10 00	Sept...	10 00	Dec.	10 00
						Average	$10.0000

FURNITURE: Chairs, kitchen, common spindle.

[Price per dozen, in New York, on the first of each month.]

Jan....	$5 50	Apr..	$5 50	July....	$6 00	Oct....	$6 00
Feb....	5 50	May..	5 50	Aug...	6 00	Nov..	6 00
Mar.....	5 50	June...	6 00	Sept...	6 00	Dec..	6.00
						Average.	$5.7917

FURNITURE: Tables, kitchen, 3½-foot.

[Price per dozen, in New York, on the first of each month.]

Jan.....	$18 00	Apr....	$18 00	July....	$18 00	Oct.....	$18 00
Feb..	18 00	May..	18 00	Aug....	18 00	Nov.....	18 00
Mar....	18 00	June...	18 00	Sept...	18 00	Dec.	18 00
						Average	$18.0000

GLASSWARE: Nappies, 4-inch.

[Price per dozen, f. o. b. factory, on the first of each month.]

Jan.....	$0 14	Apr...	$0 14	July...	$0 14	Oct.....	$0 14
Feb....	.14	May...	.14	Aug...	.14	Nov....	.14
Mar....	.14	June.	.14	Sept...	.14	Dec...	.14
						Average.	$0.1400

GLASSWARE: Pitchers, one-half gallon, common.

[Price per dozen, f. o. b. factory, on the first of each month.]

Jan.....	$1 05	Apr...	$1 05	July...	$1 05	Oct.....	$1.05
Feb.....	1 05	May...	1 05	Aug...	1 05	Nov.....	1 05
Mar....	1 05	June..	1 05	Sept...	1.05	Dec.....	1.05
						Average.	$1.0500

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

HOUSE FURNISHING GOODS—Concluded.

GLASSWARE: Tumblers, table, one-third pint, common.

[Price per dozen, f. o. b. factory, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.15	Apr...	$0.15	July...	$0.15	Oct....	$0.15
Feb.....	.15	May...	.15	Aug...	.15	Nov....	.15
Mar....	.15	June...	.15	Sept...	.15	Dec.....	.15
						Average.	$0.1500

TABLE CUTLERY: Carvers, stag handles.

[Price per pair on the first of each month.]

Jan.....	$0.75	Apr...	$0.75	July...	$0.85	Oct....	$0.85
Feb.....	.75	May...	.75	Aug...	.85	Nov....	.85
Mar....	.75	June..	.75	Sept...	.85	Dec.....	.85
						Average.	$0.80

TABLE CUTLERY: Knives and forks, cocobolo handles, metal bolsters.

[Price per gross on the first of each month.]

Jan.....	$6.30	Apr...	$6.60	July...	$6.60	Oct.....	$6.60
Feb.. ..	6.30	May...	6.60	Aug...	6.60	Nov...	6.35
Mar....	6.30	June..	6.60	Sept...	6.60	Dec. .	6.35
						Average.	$6.4833

WOODEN WARE: Pails, oak-grained, 3-hoop, wire ear.

[Price per dozen, in New York, on the first of each month, quotations from the Merchants' Review.]

Jan.....	$1.70	Apr...	$1.95	July...	$1.95	Oct.....	$2.10
Feb. ..	1.70	May...	1.95	Aug...	2.10	Nov....	2.10
Mar....	1.95	June. .	1.95	Sept...	2.10	Dec... .	2.10
						Average.	$1.9708

WOODEN WARE: Tubs, oak-grained, 3 in nest.

[Price per nest of 3, in New York, on the first of each month, quotations from the Merchants' Review.]

Jan.....	$1.45	Apr....	$1.60	July...	$1.65	Oct.....	$1.65
Feb.....	1.45	May...	1.60	Aug...	1.65	Nov....	1.65
Mar....	1.60	June...	1.60	Sept...	1.65	Dec. .	1.65
						Average.	$1.60

MISCELLANEOUS.

COTTON-SEED MEAL.

[Price per ton of 2,000 pounds, in New York, on the first of each month.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$29.60	Apr....	$27.60	July...	$28.85	Oct.....	$30.10
Feb.....	28.60	May...	26.60	Aug...	28.35	Nov....	30.10
Mar.....	28.35	June...	27.60	Sept...	29.10	Dec.....	29.60
						Average.	$28.7042

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Continued.

MISCELLANEOUS—Continued.

COTTON-SEED OIL: Summer yellow, prime.

[Price per gallon, in New York, on the first of each month; quotations from the Oil, Paint, and Drug Reporter.]

Month.	Price.	Month.	Price.	Month.	Price.	Month.	Price.
Jan.....	$0.40½	Apr....	$0.46½	July...	$0.58	Oct....	$0.52
Feb.....	.43½	May...	.48¾	Aug...	.57	Nov....	.38
Mar....	.48½	June...	.56½	Sept...	.56½	Dec. ...	.38½
						Average.	$0.4869

JUTE: Raw, M-double triangle, shipment, medium grades.

[Price per pound, in New York, on the first of each month.]

Jan.....	$0.06¼	Apr..	$0.05⅞	July...	$0.05	Oct.....	$0.04⅛
Feb.....	.05⅛	May...	.05⅜	Aug...	.04⅛	Nov....	.04⅛
Mar.....	.05¾	June..	.05	Sept...	.04	Dec.. ..	.03⅞
						Average.	$0.0486

MALT: Western made.

[Price per bushel, in New York, on the last of each month, quotations from the Brewers' Journal.]

Jan.....	$0.71-$0.81	Apr...	$0.90-$1.00	July...	$1.00-$1.05	Oct....	$1.22-$1.27
Feb....	.74- .84	May..	1.00- 1.12	Aug...	1.00- 1.05	Nov....	1.17- 1.25
Mar....	.90- 1.00	June...	1.00- 1.10	Sept...	1.13- 1.15	Dec. ..	1.17- 1.25
						Average.	$1.0346

PAPER: News, wood.

[Price per pound, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan.....	$0.0225-$0.0250	Apr....	$0.0245-$0.0265	July...	$0.0245-$0.0265	Oct.....	$0.0255-$0.0275
Feb. ...	.0200- .0225	May...	.0245- .0265	Aug...	.0245- .0265	Nov....	.0255- .0275
Mar.....	.0200- .0225	June.	.0245- .0265	Sept...	.0245- .0265	Dec... .	.0255- .0275
						Average.	$0.0249

PAPER: Wrapping, manila, No. 1, jute.

[Price per pound, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan....	$0.05	Apr...	$0.05	July...	$0.05	Oct.....	$0.05¼
Feb.....	.05	May...	.05	Aug...	.05	Nov....	.05¼
Mar.....	.05	June...	.05	Sept...	.05	Dec..	.05¼
						Average.	$0.0506

PROOF SPIRITS.

[Price per gallon, including tax, in Peoria, Ill., weekly range, quotations furnished by the secretary of the Peoria Board of Trade.]

Jan.....	$1.29	Apr....	$1.29	July...	$1.31	Oct.....	$1.34
	1.29		1.29		1.31		1.34
	1.29		1.29		1.31		1.35
	1.29		1.29		1.31		1.35
Feb.....	1.29	May...	1.29	Aug...	1.31	Nov....	1.35
	1.29		1.29		1.31		1.35
	1.29		1.29		1.31		1.35
	1.29		$1.29-1.31		1.31		1.35
					1.31		1.35
Mar.....	1.29	June...	1.31	Sept...	1.32	Dec.....	1.35
	1.29		1.31		1.32		1.35
	1.29		1.31		1.34		1.35
	1.29		1.31		1.34		1.35
	1.29		1.31				
						Average.	$1.3133

TABLE I.—WHOLESALE PRICES OF COMMODITIES IN 1907—Concluded.

MISCELLANEOUS—Concluded.

ROPE: Manila, $\frac{7}{16}$-inch and larger.

[Price per pound, f. o. b New York or factory, on the first of each month, quotations from the Iron Age.]

Month.	Price	Month	Price	Month.	Price.	Month.	Price.
Jan.....	$0 12½-$0 13	Apr..	$0 13-$0 13½	July...	$0 13 -$0 13½	Oct....	$0 12½-$0.12¾
Feb.....	.13 - .13½	May...	.13- .13½	Aug...	.13 - .13½	Nov...	.11½- .12½
Mar.....	.13 - .13½	June..	.13- .13½	Sept...	.12½ .12¾	Dec.	.11½- .12
						Average.	$0.1290

RUBBER: Para Island, new.

[Price per pound, in New York, on the first of each month, quotations from the New York Journal of Commerce and Commercial Bulletin.]

Jan....	$1 18	Apr..	$1 15	July...	$1.04-$1 05	Oct....	$0.99½
Feb....	$1 18- 1 19	May ..	1 11	Aug...	1 06½	Nov....	$0.91- .92
Mar....	1 18- 1 19	June...	1.09	Sept...	1 03	Dec....	.78
						Average.	$1.0633

SOAP: Castile, mottled, pure.

[Price per pound, in New York, on the first of each month, quotations from the Oil, Paint, and Drug Reporter.]

Jan...	$0.0650	Apr. ..	$0 0650	July...	$0 0700	Oct....	$0.0700
Feb...	.0650	May...	.0650	Aug ..	.0700	Nov....	.0700
Mar. .	.0650	June. .	.0600	Sept...	.0700	Dec. ...	.0700
						Average.	$0.0671

STARCH: Laundry, Austin, Nichols & Co., 40-pound boxes, in bulk.

[Price per pound, in New York, on the first of each month, quotations from the Merchants' Review.]

Jan....	$0 03¾	Apr....	$0 04	July ..	$0 04	Oct.....	$0.04¼
Feb...	.04	May...	.04	Aug...	.04	Nov....	.04¼
Mar.....	.04	June...	.04	Sept...	.04	Dec.....	.04¼
						Average.	$0.0404

TOBACCO: Plug, Climax.

[Price per pound, in New York, on the first of each month, quotations from the Merchants' Review.]

Jan.....	$0.47	Apr...	$0.47	July...	$0.47	Oct...	$0.47
Feb.....	.47	May...	.47	Aug...	.47	Nov....	.47
Mar....	.47	June...	.47	Sept...	.47	Dec.....	.47
						Average.	$0.47

TOBACCO: Smoking, granulated, Seal of North Carolina.

[Price per pound, in New York, on the first of each month; quotations from the Merchants' Review.]

Jan....	$0.60	Apr....	$0.60	July..	$0 60	Oct.....	$0.60
Feb.....	.60	May...	.60	Aug...	.60	Nov....	.60
Mar....	.60	June...	.60	Sept...	.60	Dec.....	.60
						Average.	$0.60

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899).

[For explanation and discussion of this table, see pages 325 to 328. For a more detailed description of the articles, see Table I. Average for 1907 computed from quotations in Table I.]

Month.	Farm products.									
	Barley by sample.		Cattle, steers, choice to extra.		Cattle: steers, good to choice.		Corn: No. 2, cash.		Cotton upland, middling.	
	Price per bushel.	Relative price.	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price	Price per bushel	Relative price	Price per pound.	Relative price.
Average, 1890-1899.	$0.4534	100.0	$5.3203	100.0	$4.7347	100.0	$0.3804	100.0	$0.07762	100.0
Jan.	.5425	119.7	6.6375	124.8	5.7000	120.4	.4123	108.4	.10860	139.9
Feb.	.5913	130.4	6.6188	124.4	5.9125	124.9	.4344	114.2	.11025	142.0
Mar.	.6945	153.2	6.4550	121.3	5.7300	121.0	.4413	116.0	.11163	143.8
Apr.	.7069	155.9	6.4000	120.3	5.8375	123.3	.4678	123.0	.11130	143.4
May	.7790	171.8	6.1650	115.9	5.6550	119.4	.5303	139.4	.12025	154.9
June	.7450	164.3	6.7438	126.8	6.2063	131.1	.5332	140.2	.13050	168.1
July	.6613	145.9	7.0188	131.9	6.3250	133.6	.5408	142.2	.13160	169.5
Aug.	.7010	154.6	6.9950	131.5	6.1800	130.5	.5654	148.6	.13338	171.8
Sept.	.9125	201.3	6.7500	126.9	5.8038	124.5	.6163	162.0	.12688	163.5
Oct.	1.0313	227.5	6.7250	126.4	5.8313	123.2	.6183	162.5	.11530	148.5
Nov.	.8670	191.2	6.2600	117.7	5.4000	114.1	.5856	153.9	.11025	142.0
Dec.	.9700	213.9	5.8375	109.7	5.1438	108.6	.5925	155.8	.11790	151.9
Average, 1907	.7663	169.0	6.5442	123.0	5.8120	122.8	.5280	138.8	.11879	153.0

Month.	Flaxseed: No. 1.		Hay timothy, No. 1.		Hides green, salted, packers, heavy native steers		Hogs: heavy.		Hogs light.	
	Price per bushel.	Relative price	Price per ton	Relative price.	Price per pound	Relative price	Price per 100 lbs.	Relative price	Price per 100 lbs.	Relative price.
Average, 1890-1899.	$1.1132	100.0	$10.4304	100.0	$0.0937	100.0	$4.4123	100.0	$4.4206	100.0
Jan.	1.1500	103.3	15.5000	148.6	.1627	173.6	6.5925	149.4	6.5775	148.8
Feb.	1.1950	107.3	16.2500	155.8	.1620	172.9	7.0313	159.4	6.9906	158.1
Mar.	1.2050	108.2	16.0000	153.4	.1531	163.4	6.6469	150.6	6.7063	151.7
Apr.	1.1650	104.7	16.4000	157.2	.1441	153.8	6.6225	150.1	6.6675	150.8
May	1.1750	105.6	17.6250	169.0	.1437	153.4	6.3281	143.4	6.4531	146.0
June	1.3175	118.4	20.0000	191.7	.1488	158.8	6.0813	137.8	6.1969	140.2
July	1.2525	112.5	18.4000	176.4	.1472	157.1	5.8875	133.4	6.2000	140.3
Aug.	1.1475	103.1	19.0000	182.2	.1411	150.6	5.9813	135.6	6.3688	144.1
Sept.	1.1850	106.4	17.0625	163.6	.1411	150.6	5.9938	135.8	6.4063	144.9
Oct.	1.2000	107.8	16.6500	159.6	.1470	156.9	6.2350	141.3	6.4475	145.9
Nov.	1.1300	101.5	15.3125	146.8	.1364	145.6	5.0063	113.5	5.0594	114.5
Dec.	1.0475	94.1	15.6000	149.6	.1185	126.5	4.6500	105.4	4.6550	105.3
Average, 1907	1.1808	106.1	16.9387	162.4	.1455	155.3	6.0795	137.8	6.2163	140.6

Month.	Hops: N. Y., choice.		Oats cash.		Rye: No. 2, cash.		Sheep native.		Sheep: western.	
	Price per pound.	Relative price.	Price per bushel.	Relative price.	Price per bushel.	Relative price	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price.
Average, 1890-1899.	$0.1771	100.0	$0.2688	100.0	$0.5288	100.0	$3.7580	100.0	$3.9541	100.0
Jan.	.2200	124.2	.3483	129.6	.6180	116.9	5.0050	133.2	4.9550	125.3
Feb.	.2200	124.2	.3919	145.8	.6706	126.8	5.0938	135.5	5.0000	126.5
Mar.	.2200	124.2	.4085	152.0	.6738	127.4	5.3375	142.0	5.2625	133.1
Apr.	.1950	110.1	.4328	161.0	.6910	130.7	5.6150	149.4	5.6150	142.0
May	.1550	87.5	.4619	171.8	.7950	150.3	5.4500	145.0	5.4375	137.5
June	.1550	87.5	.4463	166.0	.8675	164.1	5.4688	145.5	5.4688	138.3
July	.1550	87.5	.4358	162.1	.8540	161.5	5.1150	136.1	5.1150	129.4
Aug.	.1550	87.5	.4881	181.6	.7763	146.8	5.0625	134.7	5.0938	128.8
Sept.	.1450	81.9	.5321	198.0	.8813	166.7	5.1563	137.2	5.1563	130.4
Oct.	.1300	73.4	.5170	192.3	.8445	159.7	4.7400	126.1	4.7750	120.8
Nov.	.1700	96.0	.4679	174.1	.7825	148.0	3.4375	91.5	3.4375	86.9
Dec.	.1650	93.2	.4966	184.7	.7845	148.4	3.4200	91.0	3.4200	86.5
Average, 1907.	.1738	98.1	.4501	167.4	.7688	145.4	4.8962	130.3	4.8835	123.5

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Farm products		Food, etc.							
	Wheat: regular grades, cash.		Beans: medium, choice.		Bread: crackers, Boston.		Bread: crackers, soda.		Bread: loaf (Wash. market).	
	Price per bushel.	Relative price.	Price per bushel.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per lb. before baking.	Relative price.
Average, 1890-1899	$0.7510	100.0	$1.6699	100.0	$0.0673	100.0	$0.0718	100.0	$0.0354	100.0
Jan	.7290	97.1	1.5500	92.8	.0900	133.7	.0650	90.5	.0356	100.6
Feb	.7946	105.8	1.5000	89.8	.0900	133.7	.0650	90.5	.0356	100.6
Mar	.7884	105.0	1.5000	89.8	.0900	133.7	.0650	90.5	.0356	100.6
Apr	.8106	107.9	1.4625	87.6	.0900	133.7	.0650	90.5	.0356	100.6
May	.9588	127.7	1.4500	86.8	.0900	133.7	.0650	90.5	.0356	100.6
June	.9676	128.8	1.8500	110.8	.0900	133.7	.0650	90.5	.0356	100.6
July	.9650	128.5	1.7000	101.8	.0900	133.7	.0650	90.5	.0356	100.6
Aug	.9292	123.7	1.6500	98.8	.0900	133.7	.0650	90.5	.0356	100.6
Sept	1.0104	134.5	1.8125	108.5	.0900	133.7	.0650	90.5	.0356	100.6
Oct	1.0425	138.8	2.3000	137.7	.0900	133.7	.0650	90.5	.0356	100.6
Nov	.9346	124.4	2.2625	135.5	.0900	133.7	.0650	90.5	.0356	100.6
Dec	.9638	128.3	2.2875	137.0	.0900	133.7	.0650	90.5	.0356	100.6
Average, 1907	.9073	120.8	1.7771	107.4	.0900	133.7	.0650	90.5	.0356	100.6

Month.	Food, etc.									
	Bread: loaf, homemade (N. Y. market)		Bread: loaf, Vienna (N. Y. market)		Butter: creamery, Elgin (Elgin market)		Butter: creamery, extra (N. Y. market).		Butter: dairy, New York State.	
	Price per pound before baking	Relative price	Price per pound before baking	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	$0.0317	100.0	$0.0352	100.0	$0.2170	100.0	$0.2242	100.0	$0.2024	100.0
Jan	.0376	118.6	.0400	113.6	.3063	141.2	.3145	140.3	.2730	134.9
Feb	.0376	118.6	.0400	113.6	.3275	150.9	.3325	148.3	.2988	147.6
Mar	.0376	118.6	.0400	113.6	.3075	141.7	.3144	140.2	.2963	146.4
Apr	.0376	118.6	.0400	113.6	.3000	138.2	.3080	137.4	.2910	143.8
May	.0376	118.6	.0400	113.6	.2375	109.4	.2525	112.6	.2444	120.8
June	.0376	118.6	.0400	113.6	.2313	106.6	.2425	108.2	.2331	115.2
July	.0376	118.6	.0400	113.6	.2450	112.9	.2543	113.4	.2420	119.6
Aug	.0376	118.6	.0400	113.6	.2490	114.7	.2475	110.4	.2400	118.6
Sept	.0376	118.6	.0400	113.6	.2813	129.6	.2750	122.7	.2650	130.9
Oct	.0376	118.6	.0400	113.6	.2888	133.1	.2860	127.6	.2790	137.8
Nov	.0376	118.6	.0400	113.6	.2625	121.0	.2713	121.0	.2631	130.0
Dec	.0376	118.6	.0400	113.6	.2830	130.4	.2885	128.7	.2740	135.4
Average, 1907	.0376	118.6	.0400	113.6	.2761	127.2	.2830	126.2	.2671	132.0

Month.	Cheese: N. Y., full cream.		Coffee: Rio, No. 7.		Eggs: new-laid, fancy, near-by.		Fish: cod, dry, bank, large.		Fish: herring, shore, round.	
	Price per pound.	Relative price	Price per pound.	Relative price.	Price per dozen.	Relative price.	Price per quintal.	Relative price.	Price per barrel.	Relative price.
Average, 1890-1899	$0.0987	100.0	$0.1313	100.0	$0.1963	100.0	$5.5849	100.0	$3.7763	100.0
Jan	.1450	146.9	.0713	54.3	.3160	161.0	8.0000	143.2	6.0000	158.9
Feb	.1469	148.8	.0694	52.9	.2938	149.7	8.0000	143.2	6.0000	158.9
Mar	.1475	149.4	.0725	55.2	.2088	106.4	8.0000	143.2	6.0000	158.9
Apr	.1500	152.0	.0700	53.3	.1930	98.3	8.0000	143.2	6.0000	158.9
May	.1360	137.8	.0675	51.4	.1919	97.8	8.0000	143.2	6.0000	158.9
June	.1188	120.4	.0650	49.5	.1869	95.2	8.0000	143.2	6.0000	158.9
July	.1235	125.1	.0631	48.1	.2165	110.3	8.0000	143.2	6.0000	158.9
Aug	.1219	123.5	.0650	49.5	.2588	131.8	7.3750	132.1	(a)	....
Sept	.1366	138.4	.0631	48.1	.2763	140.8	7.3750	132.1	(a)	....
Oct	.1575	159.6	.0644	49.0	.3340	170.1	7.3750	132.1	6.5000	172.1
Nov	.1500	152.0	.0600	45.7	.4288	218.4	7.3750	132.1	6.5000	172.1
Dec	.1565	158.6	.0588	44.8	.4020	204.8	7.3750	132.1	6.5000	172.1
Average, 1907	.1414	143.3	.0658	50.1	.2771	141.2	7.7396	138.6	6.1500	162.9

a No quotation for month.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Food, etc.									
	Fish: mackerel, salt, large 3s.		Fish: salmon, canned.		Flour: buckwheat.		Flour: rye.		Flour: wheat, spring patents.	
	Price per barrel.	Relative price.	Price per 12 cans.	Relative price.	Price per 100 lbs.	Relative price.	Price per barrel.	Relative price.	Price per barrel.	Relative price.
Average, 1890-1899	$14.1306	100.0	$1.4731	100.0	$1.9428	100.0	$3.3171	100.0	$4.2972	100.0
Jan	17.0000	120.3	1.6750	113.7	2.2500	115.8	3.9750	119.8	4.0850	95.1
Feb	16.5000	116.8	1.6750	113.7	2.1750	112.0	3.9250	118.3	4.2500	98.9
Mar	16.0000	113.2	1.6750	113.7	2.1000	108.1	3.9000	117.6	4.1500	96.6
Apr	12.0000	84.9	1.6750	113.7	2.1500	110.7	3.8500	116.1	4.1700	97.0
May	12.0000	84.9	1.6750	113.7	(a)	....	3.9500	119.1	4.8188	112.1
June	12.5000	88.5	1.6500	112.0	(a)	....	5.0500	152.2	5.0625	117.8
July	12.5000	88.5	(a)	....	(a)	....	5.0750	153.0	5.1350	119.5
Aug	12.5000	88.5	1.6500	112.0	(a)	....	4.9250	148.5	5.0313	117.1
Sept	13.0000	92.0	(a)	....	(a)	....	4.8250	145.5	5.3063	123.5
Oct	14.0000	99.1	(a)	....	3.0000	154.4	5.1750	156.0	5.5800	129.9
Nov	14.5000	102.6	(a)	....	3.2000	164.7	5.2000	156.8	5.4438	126.7
Dec	14.5000	102.6	(a)	....	3.1250	160.9	5.3750	162.0	5.4600	127.1
Average, 1907	13.9167	98.5	1.6679	113.2	2.5714	132.4	4.6021	138.7	4.8755	113.5

Month.	Flour: wheat, winter straights.		Fruit: apples, evaporated, choice.		Fruit: apples, sun-dried.		Fruit: currants, in barrels.		Fruit: prunes, California.	
	Price per barrel.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	$3.8450	100.0	$0.0847	100.0	$0.0515	100.0	$0.0375	100.0	$0.0774	100.0
Jan	3.3050	86.0	.0838	98.9	.0675	131.1	.0725	193.3	.0575	74.3
Feb	3.3438	87.0	.0844	99.6	.0650	126.2	.0756	201.6	.0563	72.7
Mar	3.3250	86.5	.0825	97.4	.0638	123.9	.0744	198.4	.0556	71.8
Apr	3.3350	86.7	.0700	82.6	.0600	116.5	.0731	194.9	.0531	68.6
May	3.9750	103.4	.0725	85.6	.0600	116.5	.0681	181.6	.0500	64.6
June	4.2750	111.2	.0725	85.6	.0600	116.5	.0688	183.5	.0575	74.3
July	4.2900	111.6	.0800	94.5	(a)	....	.0700	186.7	.0613	79.2
Aug	4.0875	106.3	.0825	97.4	(a)	....	.0688	183.5	.0625	80.7
Sept	4.2375	110.2	.0900	106.3	(a)	....	.0663	176.8	.0663	85.7
Oct	4.5950	119.5	.0975	115.1	(a)	....	.0688	183.5	.0650	84.0
Nov	4.5500	118.3	.0963	113.7	(a)	....	.0688	183.5	.0650	84.0
Dec	4.5100	117.3	.1000	118.1	.0700	135.9	.0681	181.6	.0619	80.0
Average, 1907	3.9877	103.7	.0843	99.5	.0638	123.9	.0703	187.5	.0593	76.6

Month.	Fruit: raisins, California, London layer.		Glucose.		Lard: prime contract.		Meal: corn, fine white.		Meal: corn, fine yellow.	
	Price per box.	Relative price.	Price per 100 lbs.	Relative price.	Price per pound.	Relative price.	Price per 100 lbs.	Relative price.	Price per 100 lbs.	Relative price.
Average, 1890-1899	$1.5006	100.0	[b]$1.4182	100.0	$0.0654	100.0	$1.0486	100.0	$1.0169	100.0
Jan	1.5000	100.0	2.1100	148.8	.0976	149.2	1.3000	124.0	1.3000	127.8
Feb	1.4000	93.3	2.1100	148.8	.1005	153.7	1.3000	124.0	1.3000	127.8
Mar	1.4000	93.3	2.1100	148.8	.0943	144.2	1.3000	124.0	1.3000	127.8
Apr	1.5500	103.3	2.1100	148.8	.0904	138.2	1.3000	124.0	1.3000	127.8
May	1.5750	105.0	2.1100	148.8	.0936	143.1	1.2625	120.4	1.2625	124.2
June	1.5750	105.0	2.2850	161.1	.0904	138.2	1.3250	126.4	1.3250	130.3
July	1.5750	105.0	2.2850	161.1	.0911	139.3	1.3500	128.7	1.3500	132.8
Aug	1.8000	120.0	2.2850	161.1	.0919	140.5	1.3000	124.0	1.3000	127.8
Sept	1.8000	120.0	2.3850	168.2	.0923	141.1	1.4000	133.5	1.4000	137.7
Oct	1.8000	120.0	2.3800	167.8	.0931	142.4	1.5875	151.4	1.5875	156.1
Nov	1.8000	120.0	2.4800	174.9	.0864	132.1	1.5400	146.9	1.5400	151.4
Dec	1.7500	116.6	2.4800	174.9	.0835	127.7	1.3250	126.4	1.3250	130.3
Average, 1907	1.6271	108.4	2.2608	159.4	.0920	140.7	1.3575	129.5	1.3575	133.5

[a] No quotation for month.

[b] Average for 1893-1899.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Food, etc.									
	Meat: bacon, short clear sides.		Meat: bacon, short rib sides		Meat: beef, fresh, native sides		Meat: beef, salt, extra mess.		Meat: beef, salt, hams, western.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per barrel.	Relative price.
Average, 1890-1899	$0.0675	100.0	$0.0656	100.0	$0.0771	100.0	$8.0166	100.0	$18.0912	100.0
Jan	.0981	145.3	.0946	144.2	.0815	105.7	8.8750	110.7	24.2500	134.0
Feb	.1028	152.3	.0991	151.1	.0806	104.5	9.2500	115.4	24.6250	136.1
Mar	.0997	147.7	.0950	144.8	.0800	103.8	9.7500	121.6	25.0000	138.2
Apr	.0961	142.4	.0924	140.9	.0833	108.0	9.7500	121.6	25.0000	138.2
May	.0978	144.9	.0944	143.9	.0857	111.2	9.7500	121.6	25.0000	138.2
June	.0953	141.2	.0928	141.5	.0919	119.2	9.7500	121.6	25.0000	138.2
July	.0939	139.1	.0914	139.3	.0950	123.2	9.7500	121.6	25.0000	138.2
Aug	.0944	139.9	.0919	140.1	.0963	124.9	9.7500	121.6	26.2500	145.1
Sept	.0953	141.2	.0916	139.6	.0928	120.4	10.0000	124.7	28.5000	157.5
Oct	.0956	141.6	.0918	139.9	.0940	121.9	10.2500	127.9	28.8000	159.2
Nov	.0931	137.9	.0888	135.4	.0935	121.3	10.2500	127.9	29.0000	160.3
Dec	.0850	125.9	.0811	123.6	.0870	112.8	10.6250	132.5	26.4000	145.9
Average, 1907	.0954	141.3	.0919	140.1	.0884	114.7	9.8173	122.5	26.0519	144.0

Month.	Meat: hams, smoked.		Meat: mutton, dressed.		Meat: pork, salt, mess, old to new.		Milk: fresh.		Molasses: New Orleans, open kettle.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per quart.	Relative price.	Price per gallon.	Relative price.
Average, 1890-1899	$0.0984	100.0	$0.0754	100.0	$11.6332	100.0	$0.0255	100.0	$0.3151	100.0
Jan	.1313	133.4	.0860	114.1	18.0000	154.7	.0375	147.1	.4250	134.9
Feb	.1363	138.5	.0850	112.7	18.7500	161.2	.0350	137.3	.4250	134.9
Mar	.1344	136.6	.0906	120.2	18.1875	156.3	.0325	127.5	.3750	119.0
Apr	.1338	136.0	.0995	132.0	17.7750	152.8	.0325	127.5	.3750	119.0
May	.1372	139.4	.1038	137.7	18.0000	154.7	.0287	112.5	.3750	119.0
June	.1353	137.5	.0969	128.5	18.0625	155.3	.0250	98.0	.4250	134.9
July	.1348	137.0	.0810	107.4	18.2500	156.9	.0263	103.1	.4250	134.9
Aug	.1350	137.2	.0838	111.1	18.1250	155.8	.0309	121.2	.4250	134.9
Sept	.1313	133.4	.0825	109.4	17.7500	152.6	.0338	132.5	.4250	134.9
Oct	.1295	131.6	.0830	110.1	17.1500	147.4	.0400	156.9	.4250	134.9
Nov	.1222	124.2	.0825	109.4	16.0313	137.8	.0400	156.9	.4250	134.9
Dec	.1068	108.5	.0785	104.1	15.1250	130.0	.0400	156.9	.3800	120.6
Average, 1907	.1303	132.4	.0875	116.0	17.5684	151.0	.0335	131.4	.4088	129.7

Month.	Rice: domestic, choice.		Salt: American.		Soda: bicarbonate of, American.		Spices: nutmegs.		Spices: pepper, Singapore.	
	Price per pound	Relative price.	Price per barrel.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	$0.0561	100.0	$0.7044	100.0	$0.0209	100.0	$0.4322	100.0	$0.0749	100.0
Jan	.0463	82.5	.8000	113.6	.0130	62.2	.1550	35.9	.1063	141.9
Feb	.0463	82.5	.8000	113.6	.0130	62.2	.1475	34.1	.1063	141.9
Mar	.0463	82.5	.8000	113.6	.0130	62.2	.1475	34.1	.1063	141.9
Apr	.0463	82.5	.8500	120.7	.0130	62.2	.1513	35.0	.1063	141.9
May	.0463	82.5	.8500	120.7	.0130	62.2	.1475	34.1	.1013	135.2
June	.0525	93.6	.8500	120.7	.0130	62.2	.1475	34.1	.0988	131.9
July	.0525	93.6	.7600	107.9	.0130	62.2	.1325	30.7	.0944	126.0
Aug	.0613	109.3	.7180	101.9	.0130	62.2	.1375	31.8	.0981	131.0
Sept	.0613	109.3	.7300	103.6	.0130	62.2	.1338	31.0	.0981	131.0
Oct	.0613	109.3	.7450	105.8	.0130	62.2	.1288	29.8	.0963	128.6
Nov	.0600	107.0	.7960	113.0	.0130	62.2	.1263	29.2	.0919	122.7
Dec	.0600	107.0	.8200	116.4	.0130	62.2	.1213	28.1	.0888	118.6
Average, 1907	.0534	95.2	.7931	112.6	.0130	62.2	.1397	32.3	.0904	132.7

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890–1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month	Food, etc.									
	Starch pure corn		Sugar 89° fair refining.		Sugar 96° centrifugal.		Sugar granulated.		Tallow.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price	Price per pound.	Relative price.
Average, 1890–1899	$0.0548	100.0	$0.03398	100.0	$0.03860	100.0	$0.04727	100.0	$0.0435	100.0
Jan.	.0600	109.5	.03016	88.8	.03516	90.9	.04598	97.3	.0641	147.4
Feb.	.0600	109.5	.02910	85.6	.03410	88.1	.04538	96.0	.0667	153.3
Mar.	.0600	109.5	.03025	89.0	.03525	91.1	.04550	96.3	.0675	155.2
Apr.	.0600	109.5	.03210	94.5	.03710	95.9	.04613	97.6	.0629	144.6
May	.0600	109.5	.03355	98.7	.03855	99.6	.04750	100.5	.0628	144.4
June	.0600	109.5	.03289	96.8	.03789	97.9	.04850	102.6	.0638	146.7
July	.0600	109.5	.03361	98.9	.03861	99.8	.04763	100.8	.0625	143.7
Aug.	.0600	109.5	.03388	99.7	.03916	101.2	.04650	98.4	.0634	145.7
Sept.	.0600	109.5	.03443	101.3	.03943	101.9	.04650	98.4	.0625	143.7
Oct.	.0600	109.5	.03420	100.6	.03920	101.3	.04650	98.4	.0600	137.9
Nov.	.0600	109.5	.03256	95.8	.03756	97.1	.04613	97.6	.0572	131.5
Dec.	.0600	109.5	.03294	96.9	.03794	98.1	.04550	96.3	.0548	126.0
Average, 1907	.0600	109.5	.03251	95.7	.03754	97.0	.04651	98.1	.0621	142.8

Month.	Tea Formosa, fine.		Vegetables, fresh onions.		Vegetables, fresh potatoes, white, choice to fancy.		Vinegar cider, Monarch.	
	Price per pound.	Relative price.	Price per barrel.	Relative price.	Price per bushel.	Relative price.	Price per gallon.	Relative price.
Average, 1890-1899	$0.2839	100.0	$3.3985	100.0	$0.4991	100.0	$0.1478	100.0
Jan	.2300	81.0	3.5000	103.0	.3925	78.6	.1700	115.0
Feb.	.2300	81.0	4.5000	132.4	.4275	85.7	.1700	115.0
Mar.	.2300	81.0	5.5000	161.8	.4180	83.8	.1700	115.0
Apr	.2300	81.0	2.2500	66.2	.4338	86.9	.1700	115.0
May	.2300	81.0	3.0000	88.2	.6380	127.8	.1700	115.0
June	.2300	81.0	4.0000	117.7	.5175	103.7	.1700	115.0
July	.2300	81.0	4.0000	117.7	.3625	72.6	.1700	115.0
Aug.	.2300	81.0	3.1250	91.9	(a)	....	.1700	115.0
Sept.	.2300	81.0	2.2500	66.2	(a)	....	.1700	115.0
Oct.	.2300	81.0	3.2500	95.6	.5650	113.2	.1700	115.0
Nov.	.2300	81.0	3.1250	91.9	.5420	108.6	.1900	128.6
Dec.	.2300	81.0	3.5000	103.0	.5200	104.2	.1800	121.8
Average, 1907	.2300	81.0	3.5000	103.0	.4912	98.4	.1725	116.7

Month.	Cloths and clothing.									
	Bags 2-bushel, Amoskeag		Blankets: 11-4, 5 pounds to the pair, all wool.		Blankets: 11-4, 5 pounds to the pair, cotton warp, all wool filling.		Blankets: 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling.		Boots and shoes: men's brogans, split.	
	Price per bag	Relative price.	Price per pound.	Relative price	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pair.	Relative price.
Average, 1890-1899	$0.1399	100.0	$0.840	100.0	$0.613	100.0	$0.424	100.0	$0.9894	100.0
Jan.	.1850	132.2	1.000	119.0	.800	130.5	.600	141.5	1.3000	131.4
Feb.	.1850	132.2	1.000	119.0	.800	130.5	.600	141.5	1.3000	131.4
Mar.	.1850	132.2	1.000	119.0	.800	130.5	.600	141.5	1.3000	131.4
Apr.	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.3000	131.4
May	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.3000	131.4
June	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.3000	131.4
July	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.2750	128.9
Aug.	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.2750	128.9
Sept.	.2100	150.1	1.000	119.0	.800	130.5	.600	141.5	1.2500	126.3
Oct.	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.2500	126.3
Nov.	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.2250	123.8
Dec.	.1950	139.4	1.000	119.0	.800	130.5	.600	141.5	1.2000	121.3
Average, 1907	.1938	138.5	1.000	119.0	.800	130.5	.600	141.5	1.2729	128.7

[a] No quotation for month

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Cloths and clothing.									
	Boots and shoes: men's split boots.		Boots and shoes: men's vici calf shoes, Blucher bal., vici calf top, single sole		Boots and shoes: men's vici kid shoes, Goodyear welt		Boots and shoes: women's solid grain shoes.		Broadcloths: first quality, black, 54-inch, XXX wool.	
	Price per 12 pairs.	Relative price	Price per pair	Relative price	Price per pair.	Relative price	Price per pair.	Relative price	Price per yard.	Relative price.
Average, 1890-1899..	$16.350	100.0	a$2.376	100.0	$2.3000	100.0	$0.8175	100.0	$1.7320	100.0
Jan..........	26.500	162.1	2.800	b109.0	2.5000	108.7	1.0250	125.4	2.0200	116.6
Feb...	26.500	162.1	2.800	b109.0	2.5000	108.7	1.0250	125.4	2.0200	116.6
Mar................	26.500	162.1	2.800	b109.0	2.5000	108.7	1.0250	125.4	2.0200	116.6
Apr................	26.500	162.1	2.800	b109.0	2.5000	108.7	1.0250	125.4	2.0200	116.6
May.......	26.500	162.1	2.800	b109.0	2.5000	108.7	1.0250	125.4	2.0200	116.6
June........	26.500	162.1	2.800	b109.0	2.5000	108.7	1.0000	122.3	2.0200	116.6
July....	26.500	162.1	2.800	b109.0	2.5000	108.7	1.0000	122.3	2.0200	116.6
Aug........	26.000	159.0	2.800	b109.0	2.5000	108.7	1.0000	122.3	2.0200	116.6
Sept..........	26.000	159.0	2.800	b109.0	2.5000	108.7	1.0000	122.3	2.0200	116.6
Oct..	26.000	159.0	2.800	b109.0	2.5000	108.7	1.0000	122.3	2.0200	116.6
Nov..	25.500	156.0	2.800	b109.0	2.5000	108.7	.9750	119.3	2.0200	116.6
Dec. ...	25.000	152.9	2.800	b109.0	2.5000	108.7	.9750	119.3	2.0200	116.6
Average, 1907	26.167	160.0	2.800	b109.0	2.5000	108.7	1.0063	123.1	2.0200	116.6

Month.	Calico: American standard prints, 64 x 64		Carpets: Brussels, 5-frame, Bigelow.		Carpets: ingrain, 2-ply, Lowell.		Carpets: Wilton, 5-frame, Bigelow.		Cotton flannels: 2¾ yards to the pound.	
	Price per yard	Relative price	Price per yard	Relative price.	Price per yard	Relative price	Price per yard.	Relative price	Price per yard.	Relative price.
Average, 1890-1899..	c$0.0553	100.0	$1.0008	100.0	$0.4752	100.0	$1.8432	100.0	$0.0706	100.0
Jan...	.0523	d105.1	1.2480	124.7	.5760	121.2	2.2800	123.7	.0938	132.9
Feb.	.0523	d105.1	1.2480	124.7	.5760	121.2	2.2800	123.7	.0938	132.9
Mar........	.0570	d114.6	1.2480	124.7	.5760	121.2	2.2800	123.7	.0938	132.9
Apr........	.0570	d114.6	1.2480	124.7	.5760	121.2	2.2800	123.7	.0938	132.9
May.... .	.0570	d114.6	1.2480	124.7	.5760	121.2	2.2800	123.7	.1000	141.6
June..	.0570	d114.6	1.2480	124.7	.5760	121.2	2.2800	123.7	.1000	141.6
July....	.0618	d124.2	1.2480	124.7	.5760	121.2	2.2800	123.7	.1025	145.2
Aug.......	.0618	d124.2	1.2480	124.7	.5760	121.2	2.2800	123.7	.1025	145.2
Sept....	.0665	d133.7	1.2480	124.7	.5760	121.2	2.2800	123.7	.1025	145.2
Oct...	.0665	d133.7	1.2480	124.7	.5760	121.2	2.2800	123.7	.1025	145.2
Nov.......	.0665	d133.7	1.2480	124.7	.5760	121.2	2.2800	123.7	.1000	141.6
Dec.	.0665	d133.7	1.2480	124.7	.5760	121.2	2.2800	123.7	.1000	141.6
Average, 1907.	.0602	d121.6	1.2480	124.7	.5760	121.2	2.2800	123.7	.0988	139.9

Month.	Cotton flannels 3½ yards to the pound		Cotton thread: 6-cord, 200-yard spools, J. & P. Coats.		Cotton yarns: carded, white, mule-spun, northern, cones, 10/1.		Cotton yarns: carded, white, mule-spun, northern, cones, 22/1.		Denims: Amoskeag.	
	Price per yard.	Relative price.	Price per spool (e)	Relative price.	Price per pound.	Relative price.	Price per pound	Relative price.	Price per yard.	Relative price.
Average, 1890-1899..	$0.0575	100.0	$0.031008	100.0	$0.1608	100.0	$0.1969	100.0	$0.1044	100.0
Jan..........	.0775	134.8	.037240	120.1	.2200	136.8	.2500	127.0	.1275	122.1
Feb......	.0775	134.8	.037240	120.1	.2200	136.8	.2550	129.5	.1275	122.1
Mar................	.0775	134.8	.037240	120.1	.2150	133.7	.2550	129.5	.1300	124.5
Apr............	.0775	134.8	.037240	120.1	.2200	136.8	.2500	127.0	.1300	124.5
May................	.0800	139.1	.037240	120.1	.2200	136.8	.2500	127.0	.1300	124.5
June.........	.0800	139.1	.045080	145.4	.2300	143.0	.2650	134.6	.1400	134.1
July................	.0825	143.5	.045080	145.4	.2350	146.1	.2750	139.7	.1450	138.9
Aug.......	.0825	143.5	.045080	145.4	.2350	146.1	.2750	139.7	.1475	141.3
Sept.......	.0825	143.5	.045080	145.4	.2300	143.0	.2700	137.1	.1475	141.3
Oct.........	.0825	143.5	.045080	145.4	.2200	136.8	.2600	132.0	.1475	141.3
Nov......	.0800	139.1	.045080	145.4	.2000	124.4	.2400	121.9	.1425	136.5
Dec................	.0800	139.1	.045080	145.4	.2000	124.4	.2400	121.9	.1425	136.5
Average, 1907... ..	.0800	139.1	.041813	134.8	.2204	137.1	.2571	130.6	.1381	132.3

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a Men's calf bal. shoes, Goodyear welt, dongola top.

b For method of computing relative price, see pages 327 and 328, average price for 1906, $2.775.

c Calico, Cocheco prints.

d For method of computing relative price, see pages 327 and 328; average price for 1906, $0.0495.

e Freight paid.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Cloths and clothing.									
	Drillings: brown, Pepperell.		Drillings: 30-inch, Stark A.		Flannels: white, 4-4, Ballard Vale No. 3.		Ginghams: Amoskeag.		Ginghams: Lancaster.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	$0.0572	100.0	$0.0521	100.0	$0.3768	100.0	$0.0533	100.0	$0.0573	100.0
Jan.	.0825	144.2	.0729	139.9	.4613	122.4	.0600	112.6	.0650	113.4
Feb.	.0825	144.2	.0768	147.4	.4613	122.4	.0600	112.6	.0675	117.8
Mar.	.0825	144.2	.0764	146.6	.4613	122.4	.0600	112.6	.0675	117.8
Apr.	.0825	144.2	.0760	145.9	.4613	122.4	.0600	112.6	.0675	117.8
May	.0825	144.2	.0824	158.2	.4613	122.4	.0600	112.6	.0675	117.8
June	.0825	144.2	.0787	151.1	.4613	122.4	.0600	112.6	.0675	117.8
July	.0825	144.2	.0804	154.3	.4613	122.4	.0700	131.3	.0675	117.8
Aug.	.0825	144.2	.0742	142.4	.4613	122.4	.0750	140.7	.0675	117.8
Sept.	.0825	144.2	.0812	155.9	.4687	124.4	.0750	140.7	.0725	126.5
Oct.	.0825	144.2	.0782	150.1	.4687	124.4	.0700	131.3	.0725	126.5
Nov.	.0825	144.2	.0791	151.8	.4687	124.4	.0700	131.3	.0725	126.5
Dec.	.0825	144.2	.0822	157.8	.4687	124.4	.0700	131.3	.0725	126.5
Average, 1907	.0825	144.2	.0782	150.1	.4638	123.1	.0658	123.5	.0690	120.4

Month.	Horse blankets: 6 pounds each, all wool.		Hosiery: men's cotton half hose, seamless, fast black, 20 to 22 ounce.		Hosiery: men's cotton, half hose, seamless, 84 needles.		Hosiery: women's combed Egyptian cotton hose, high spliced heel.		Hosiery: women's cotton hose, seamless, fast black, 26 to 28 ounce.	
	Price per pound.	Relative price.	Price per 12 pairs.[a]	Relative price.[a]	Price per 12 pairs.	Relative price.	Price per 12 pairs.	Relative price.	Price per 12 pairs.	Relative price.
Average, 1890-1899	$0.573	100.0	$0.9555	100.0	$0.7845	100.0	[b]$1.850	100.0	$0.9310	100.0
Jan.	.750	130.9	[c].6615	[c]85.3	.7500	95.6	2.025	109.5	[c].7595	[c]81.6
Feb.	.750	130.9	[c].6615	[c]85.3	.7500	95.6	2.025	109.5	[c].7595	[c]81.6
Mar.	.750	130.9	[c].6615	[c]85.3	.7500	95.6	2.025	109.5	[c].7595	[c]81.6
Apr.	.750	130.9	.6860	88.5	.7500	95.6	2.025	109.5	.7840	84.2
May	.750	130.9	[d].6860	[d]88.5	.7500	95.6	2.025	109.5	[d].7840	[d]84.2
June	.750	130.9	[d].6860	[d]88.5	.7500	95.6	2.025	109.5	[d].7840	[d]84.2
July	.750	130.9	[d].6860	[d]88.5	.7500	95.6	2.025	109.5	[d].7840	[d]84.2
Aug.	.750	130.9	[d].6860	[d]88.5	.7500	95.6	2.025	109.5	[d].7840	[d]84.2
Sept.	.750	130.9	.7350	94.8	.7500	95.6	2.025	109.5	.8330	89.5
Oct.	.750	130.9	[e].7350	[e]94.8	.7500	95.6	2.025	109.5	[e].8330	[e]89.5
Nov.	.750	130.9	[e].7350	[e]94.8	.7500	95.6	2.025	109.5	[e].8330	[e]89.5
Dec.	.750	130.9	[e].7350	[e]94.8	.7500	95.6	2.025	109.5	[e].8330	[e]89.5
Average, 1907	.750	130.9	[f].7350	[f]94.8	.7500	95.6	2.025	109.5	[f].8330	[f]89.5

[a] The price for 1890-1903 is for two-thread goods. Prices for 1904 to 1907 are for single-thread goods. For method of computing relative price, see pages 327 and 328, price of single-thread goods, $0.6370 in April, 1906, and $0.6615 in September, 1906.

[b] Average for 1893-1899.

[c] September, 1906, price.

[d] April, 1907, price.

[e] September, 1907, price.

[f] September, 1907, price, which represents the bulk of sales during the year.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Cloths and clothing.									
	Leather, harness, oak, packer's hides, heavy, No. 1.		Leather: sole, hemlock.		Leather: sole, oak.		Leather: wax calf, 30 to 40 lbs. to the dozen, B grade.		Linen shoe thread: 10s, Barbour.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per sq. foot.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	[a]$0.2590	100.0	$0.1939	100.0	$0.3363	100.0	$0.6545	100.0	$0.8748	100.1
Jan	.3800	[b]131.1	.2625	135.4	.4050	120.4	.7250	110.8	.8930	102.1
Feb	.3800	[b]131.1	.2625	135.4	.3850	114.5	.7250	110.8	.8930	102.1
Mar	.3800	[b]131.1	.2625	135.4	.3750	111.5	.7750	118.4	.8930	102.1
Apr	.3800	[b]131.1	.2650	136.7	.3750	111.5	.7750	118.4	.8930	102.1
May	.3800	[b]131.1	.2650	136.7	.3750	111.5	.7750	118.4	.8930	102.1
June	.3700	[b]127.7	.2650	136.7	.3750	111.5	.7750	118.4	.8930	102.1
July	.3700	[b]127.7	.2650	136.7	.3650	108.5	.7750	118.4	.8930	102.1
Aug	.3700	[b]127.7	.2650	136.7	.3800	113.0	.7750	118.4	.8930	102.1
Sept	.3700	[b]127.7	.2650	136.7	.3800	113.0	.7750	118.4	.8930	102.1
Oct	.3700	[b]127.7	.2650	136.7	.3950	117.5	.7750	118.4	.8930	102.1
Nov	.3700	[b]127.7	.2650	136.7	.3900	116.0	.7750	118.4	.8930	102.1
Dec	.3650	[b]125.9	.2650	136.7	.3850	114.5	.7750	118.4	.8930	102.1
Average, 1907	.3738	[b]129.0	.2644	136.4	.3821	113.6	.7667	117.1	.8930	102.1

Month.	Linen thread 3-cord, 200-yard spools, Barbour.		Overcoatings: chinchilla, B-rough, all wool.		Overcoatings: chinchilla, cotton warp, C. C. grade.		Overcoatings, covert cloth, light weight, staple.		Overcoatings: Kersey, standard, 27 to 28 ounce.	
	Price per dozen spools.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	$0.8522	100.0	$2.1419	100.0	$0.4883	100.0	$2.3286	100.0	[c]$1.2472	100.0
Jan	.8835	103.7	2.5575	119.4	.4900	100.3	2.2568	96.9	1.9250	154.3
Feb	.8835	103.7	2.5575	119.4	.4950	101.4	2.2568	96.9	1.9750	158.4
Mar	.8835	103.7	2.5575	119.4	.4950	101.4	2.2568	96.9	1.9750	158.4
Apr	.8835	103.7	2.5575	119.4	.4950	101.4	2.2568	96.9	1.9750	158.4
May	.9300	109.1	2.5575	119.4	.5000	102.4	2.2568	96.9	1.9750	158.4
June	.9300	109.1	2.5575	119.4	.4900	100.3	2.2568	96.9	1.9750	158.4
July	.9300	109.1	2.5575	119.4	.5050	103.4	2.2568	96.9	1.9750	158.4
Aug	.9300	109.1	2.5575	119.4	.4900	100.3	2.2568	96.9	1.9750	158.4
Sept	.9300	109.1	2.5575	119.4	.4900	100.3	2.2508	96.9	1.9750	158.4
Oct	.9300	109.1	2.5575	119.4	.5000	102.4	2.2568	96.9	1.9750	158.4
Nov	.9300	109.1	2.5575	119.4	.4800	98.3	2.2568	96.9	1.9750	158.4
Dec	.9300	109.1	2.5575	119.4	.4600	94.2	2.2568	96.9	1.9750	158.4
Average, 1907	.9145	107.3	2.5575	119.4	.4908	100.5	2.2568	96.9	1.9708	158.0

[a] Leather: harness, oak, country middles, 14 pounds and up (except overweights, 20 pounds and up).
[b] For method of computing relative price, see pages 327 and 328, average price for 1906, $0.3713.
[c] Average for 1897-1899.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Cloths and clothing.									
	Print cloths: 28-inch, 64 x 64.		Shawls standard, all wool (low grade), 72 x 144 inch, 40 to 42 ounce		Sheetings: bleached, 9-4, Atlantic.		Sheetings: bleached, 10-4, Pepperell.		Sheetings: bleached, 10-4, Wamsutta S. T.	
	Price per yard.	Relative price.	Price per shawl.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	$0.028380	100.0	[a] $4.5787	100.0	[b] $0.1836	100.0	$0.1884	100.0	$0.2949	100.0
Jan	.040000	140.9	2.0400	[c] 107.0	.2096	[d] 121.6	.2600	138.0	.2900	98.3
Feb	.041875	147.6	2.0400	[c] 107.0	.2310	[d] 134.0	.2600	138.0	.2900	98.3
Mar	.045000	158.6	2.0400	[c] 107.0	.2187	[d] 126.8	.2800	148.6	.2900	98.3
Apr	.045000	158.6	2.0400	[c] 107.0	.2190	[d] 127.0	.2800	148.6	.3100	105.1
May	.045781	161.3	2.0400	[c] 107.0	.2174	[d] 126.1	.2800	148.6	.3100	105.1
June	.048500	170.9	2.0400	[c] 107.0	.2331	[d] 135.2	.3000	159.2	.3100	105.1
July	.050313	177.3	2.0400	[c] 107.0	.2174	[d] 126.1	.3000	159.2	.3100	105.1
Aug	.052500	185.0	2.0400	[c] 107.0	.2127	[d] 123.4	.3000	159.2	.3100	105.1
Sept	.052500	185.0	2.0400	[c] 107.0	.2126	[d] 123.3	.3000	159.2	.3100	105.1
Oct	.052500	185.0	2.0400	[c] 107.0	.2495	[d] 144.7	.3000	159.2	.3100	105.1
Nov	.050500	177.9	2.0400	[c] 107.0	.2789	[d] 161.8	.3000	159.2	.3100	105.1
Dec	.044063	155.3	2.0400	[c] 107.0	.2779	[d] 161.2	.3000	159.2	.3100	105.1
Average, 1907	.047512	167.4	2.0400	[c] 107.0	.2315	[d] 134.3	.2883	153.0	.3050	103.4

Month.	Sheetings: brown, 4-4, Atlantic A.		Sheetings: brown, 4-4, Indian Head.		Sheetings: brown, 4-4, Mass Mills, Flying Horse brand.		Sheetings: brown, 4-4, Pepperell R.		Shirtings: bleached, 4-4, Fruit of the Loom.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	$0.0553	100.0	$0.0626	100.0	[e] $0.0525	100.0	$0.0551	100.0	$0.0728	100.0
Jan	.0751	135.8	.0825	131.8	.0750	[f] 122.7	.0700	127.0	.0950	130.5
Feb	.0749	135.4	.0825	131.8	.0775	[f] 126.8	.0700	127.0	.1000	137.4
Mar	.0756	136.7	.0825	131.8	.0775	[f] 126.8	.0725	131.6	.1000	137.4
Apr	.0753	136.2	.0825	131.8	.0775	[f] 126.8	.0725	131.6	.1100	151.1
May	.0750	135.6	.0825	131.8	.0775	[f] 126.8	.0725	131.6	.1100	151.1
June	.0787	142.3	.0825	131.8	.0775	[f] 126.8	.0750	136.1	.1150	158.0
July	.0760	137.4	.0825	131.8	.0800	[f] 130.9	.0750	136.1	.1150	158.0
Aug	.0772	139.6	.0850	135.8	.0800	[f] 130.9	.0775	140.7	.1150	158.0
Sept	.0774	140.0	.0850	135.8	.0800	[f] 130.9	.0775	140.7	.1200	164.8
Oct	.0780	141.0	.0850	135.8	.0775	[f] 126.8	.0775	140.7	.1200	164.8
Nov	.0805	145.6	.0850	135.8	.0775	[f] 126.8	.0775	140.7	.1200	164.8
Dec	.0784	141.8	.0850	135.8	.0750	[f] 122.7	.0775	140.7	.1200	164.8
Average, 1907	.0768	138.9	.0835	133.4	.0777	[f] 127.1	.0746	135.4	.1117	153.4

Month.	Shirtings: bleached, 4-4, Hope.		Shirtings: bleached, 4-4, Lonsdale.		Shirtings: bleached, 4-4, Wamsutta <o> XX.		Shirtings: bleached, 4-4, Williamsville, A1.		Silk: raw, Italian, classical.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	$0.0630	100.0	$0.0727	100.0	$0.0948	100.0	$0.0876	100.0	$4.2558	100.0
Jan	.0831	131.9	.0925	127.2	.1075	113.4	.1050	119.9	5.3460	125.6
Feb	.0855	135.7	.0975	134.1	.1075	113.4	.1075	122.7	5.2223	122.7
Mar	.0855	135.7	.0975	134.1	.1075	113.4	.1150	131.3	5.3708	126.2
Apr	.0855	135.7	.0975	134.1	.1075	113.4	.1150	131.3	5.6678	133.2
May	.0855	135.7	.0975	134.1	.1075	113.4	.1150	131.3	5.9153	139.0
June	.0855	135.7	.0975	134.1	.1075	113.4	.1175	134.1	5.8163	136.7
July	.0974	154.6	.1100	151.3	.1125	118.7	.1200	137.0	5.7668	135.5
Aug	.0974	154.6	.1100	151.3	.1125	118.7	.1200	137.0	5.5935	131.4
Sept	.0974	154.6	.1100	151.3	.1125	118.7	.1200	137.0	5.8163	136.7
Oct	.0974	154.6	.1100	151.3	.1125	118.7	.1200	137.0	5.8163	136.7
Nov	.0974	154.6	.1100	151.3	.1125	118.7	.1200	137.0	5.6183	132.0
Dec	.0879	139.5	[g] .1000	137.6	.1125	118.7	.1200	137.0	5.0243	118.1
Average, 1907	.0905	143.7	.1025	141.0	.1100	116.0	.1163	132.8	5.5812	131.1

[a] Shawls: Standard, all wool, 72 x 144 inch, 42 ounce, made of high-grade wool.
[b] Sheetings: Bleached, 10-4, Atlantic.
[c] For method of computing relative price see pages 327 and 328; average price for 1906, $2.45.
[d] For method of computing relative price see pages 327 and 328; average price for 1906, $0.2095.
[e] Sheetings: brown, 4-4, Stark A. A.
[f] For method of computing relative price, see pages 327 and 328; average price for 1906, $0.0767.
[g] Nominal.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Cloths and clothing.									
	Silk: raw, Japan, filatures.		Suitings clay worsted diagonal, 12-ounce, Wash. Mills.		Suitings clay worsted diagonal, 16-ounce, Wash Mills.		Suitings: indigo blue, all wool, 54-in., 14-oz., Middlesex.		Suitings: indigo blue, all wool, 16-ounce.	
	Price per pound.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price.
Average, 1890-1899	$4.0187	100.0	[a]$0.8236	100.0	[a]$1.0068	100.0	$1.3230	100.0	$1.9154	100.0
Jan	5.1168	127.3	1.1700	142.1	1.4175	140.8	1.7100	129.3	2.4180	126.2
Feb	5.0198	124.9	1.1700	142.1	1.4175	140.8	1.7100	129.3	2.4180	126.2
Mar	5.2138	129.7	1.1700	144.1	1.4175	140.8	1.7100	129.3	2.4180	126.2
Apr	5.4805	136.4	1.1700	142.1	1.4175	140.8	1.7100	129.3	2.4180	126.2
May	5.6018	139.4	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
June	5.2865	131.5	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
July	5.0440	125.5	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
Aug	4.7530	118.3	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
Sept	5.3108	132.2	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
Oct	4.8743	121.3	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
Nov	4.7773	118.9	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
Dec	4.2438	105.6	1.1700	142.1	1.3950	138.6	1.7100	129.3	2.4180	126.2
Average, 1907	5.0002	125.9	1.1700	142.1	1.4025	139.3	1.7100	129.3	2.4180	126.2

Month	Suitings serge, Washington Mills 6700.		Tickings Amoskeag A. C. A		Trouserings fancy worsted, 21 to 22 ounce.		Underwear, shirts and drawers, white, all wool, etc.		Underwear: shirts and drawers, white, merino, 60 per cent wool, etc.	
	Price per yard.	Relative price.	Price per yard.	Relative price.	Price per yard.	Relative price	Price per 12 garments.	Relative price.	Price per 12 garments.	Relative price.
Average, 1890-1899	[b]$0.7526	100.0	$0.1061	100.0	[c]$1.9456	100.0	$23.31	100.0	[d]$15.57	100.0
Jan	1.0575	140.5	.1250	117.8	2.3625	[e]118.1	27.00	115.8	18.00	[f]106.0
Feb	1.0575	140.5	.1275	120.2	2.3625	[e]118.1	27.00	115.8	18.00	[f]106.0
Mar	1.0575	140.5	.1300	122.5	2.3625	[e]118.1	27.00	115.8	18.00	[f]106.0
Apr	1.0575	140.5	.1300	122.5	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
May	1.0575	140.5	.1350	127.2	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
June	1.0125	134.5	.1350	127.2	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
July	1.0125	134.5	.1400	132.0	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
Aug	1.0575	140.5	.1450	136.7	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
Sept	1.0575	140.5	.1450	136.7	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
Oct	1.0575	140.5	.1450	136.7	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
Nov	1.0575	140.5	.1450	136.7	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
Dec	1.0575	140.5	.1450	136.7	2.4750	[e]123.7	27.00	115.8	18.00	[f]106.0
Average, 1907	1.0500	139.5	.1373	129.4	2.4469	[e]122.3	27.00	115.8	18.00	[f]106.0

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[a] Average for 1895-1899.

[b] Average for 1892-1899.

[c] Average for 1892-1899, 22 to 23 ounce.

[d] 52 per cent wool and 48 per cent cotton.

[e] For method of computing relative price, see pages 327 and 328; average price for 1906, $2.4131.

[f] For method of computing relative price, see pages 327 and 328; average price for 1906, $18.00.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Cloths and clothing.									
	Women's dress goods cashmere, all wool, 10-11 twill, 38-inch, Atlantic J.		Women's dress goods: cashmere, cotton warp, 9-twill, 4/4, Atlantic F		Women's dress goods cashmere, cotton warp, 36-inch, Hamilton.		Women's dress goods: Danish cloth, cotton warp and worsted filling, 22-inch.		Women's dress goods: Franklin sackings, 6-4.	
	Price per yard	Relative price.	Price per yard.	Relative price	Price per yard.	Relative price.	Price per yard.	Relative price	Price per yard.	Relative price.
Average, 1890-1899	$0.2905	100.0	$0.1520	100.0	[a]$0.0883	100.0	[b]$0.0680	100.0	$0.5151	100.0
Jan.	.3920	134.9	.2205	145.1	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
Feb.	.3920	134.9	.2205	145.1	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
Mar.	.3920	134.9	.2205	145.1	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
Apr.	.3920	134.9	.2205	145.1	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
May	.3920	134.9	.2205	145.1	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
June	.3920	134.9	.2254	148.3	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
July	.3920	134.9	.2254	148.3	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
Aug.	.3920	134.9	.2254	148.3	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
Sept.	.3920	134.9	.2254	148.3	.1960	[c]127.8	.1250	[d]124.9	.6650	129.1
Oct.	.3920	134.9	.2254	148.3	.1960	[c]127.8	.1250	[d]124.9	.6175	119.9
Nov.	.3920	134.9	.2254	148.3	.1960	[c]127.8	.1250	[d]124.9	.6175	119.9
Dec.	.3920	134.9	.2254	148.3	.1960	[c]127.8	.1250	[d]124.9	.6175	119.9
Average, 1907.	.3920	134.9	.2234	147.0	.1960	[c]127.8	.1250	[d]124.9	.6531	126.8

Month.	Women's dress goods poplar cloth, cotton warp and worsted filling, 36-inch		Wool Ohio, fine fleece (X and XX grade), scoured.		Wool Ohio, medium fleece (¼ and ⅜ grade), scoured.		Worsted yarns 2-40s, Australian fine		Worsted yarns: 2-40s, XXXX, white, in skeins.	
	Price per yard.	Relative price	Price per pound.	Relative price	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	[e]$0.0758	100.0	$0.5526	100.0	$0.4564	100.0	$1.0183	100.0	$1.0071	100.0
Jan.	.1900	[f]109.6	.7021	127.1	.5270	115.5	1.3000	127.7	1.3000	129.1
Feb.	.1900	[f]109.6	.7021	127.1	.5270	115.5	1.3000	127.7	1.3000	129.1
Mar.	.1900	[f]109.6	.7021	127.1	.5135	112.5	1.3000	127.7	1.3000	129.1
Apr.	.1900	[f]109.6	.7021	127.1	.5135	112.5	1.3000	127.7	1.3000	129.1
May	.1900	[f]109.6	.7021	127.1	.5135	112.5	1.3000	127.7	1.3000	129.1
June	.1900	[f]109.6	.7234	130.9	.5135	112.5	1.3000	127.7	1.2800	127.1
July	.1900	[f]109.6	.7234	130.9	.5135	112.5	1.3000	127.7	1.2800	127.1
Aug.	.1900	[f]109.6	.7447	134.8	.5135	112.5	1.3000	127.7	1.2800	127.1
Sept.	.1900	[f]109.6	.7447	134.8	.5135	112.5	1.3000	127.7	1.2800	127.1
Oct.	.1900	[f]109.6	.7234	130.9	.5135	112.5	1.3000	127.7	1.3000	129.1
Nov.	.1900	[f]109.6	.7234	130.9	.5135	112.5	1.2800	125.7	1.3000	129.1
Dec.	.2000	[f]115.4	.7234	130.9	.5135	112.5	1.2800	125.7	1.3000	129.1
Average, 1907	.1908	[f]110.1	.7181	129.9	.5158	113.0	1.2967	127.3	1.2933	128.4

[a] Women's dress goods: cashmere, cotton warp, 27-inch, Hamilton.
[b] Women's dress goods: alpaca, cotton warp, 22-inch, Hamilton.
[c] For method of computing relative price, see pages 327 and 328, average price for 1906, $0.1911.
[d] For method of computing relative price, see pages 327 and 328, average price for 1906, $0.1217.
[e] Women's dress goods: cashmere, cotton warp, 22-inch, Hamilton.
[f] For method of computing relative price, see pages 327 and 328; average price for 1906, $0.1900.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Fuel and lighting.									
	Candles: adamantine, 6s, 14-ounce.		Coal: anthracite, broken.		Coal: anthracite, chestnut.		Coal: anthracite, egg.		Coal: anthracite, stove.	
	Price per pound.	Relative price.	Price per ton	Relative price.	Price per ton.	Relative price	Price per ton.	Relative price	Price per ton.	Relative price.
Average, 1890-1899	$0.0782	100.0	$3.3669	100.0	$3.5953	100.0	$3.5936	100.0	$3.7949	100.0
Jan	.0738	94.4	4.2042	124.9	4.9507	137.7	4.9512	137.8	4.9502	130.4
Feb	.0738	94.4	4.2020	124.8	4.9500	137.7	4.9500	137.7	4.9501	130.4
Mar	.0738	94.4	4.2011	124.8	4.9509	137.7	4.9500	137.7	4.9521	130.5
Apr	.0738	94.4	4.2007	124.8	4.4504	123.8	4.4500	123.8	4.4503	117.3
May	.0738	94.4	4.2015	124.8	4.5334	126.1	4.5265	126.0	4.5283	119.3
June	.0738	94.4	4.2049	124.9	4.6478	129.3	4.6434	129.2	4.6455	122.4
July	.0738	94.4	4.2066	124.9	4.7442	132.0	4.7399	131.9	4.7434	125.0
Aug	.0738	94.4	4.2034	124.8	4.8417	134.7	4.8444	134.8	4.8433	127.6
Sept	.0738	94.4	4.2069	124.9	4.9403	137.4	4.9500	137.7	4.9438	130.3
Oct	.0750	95.9	4.2075	125.0	4.9483	137.6	4.9510	137.8	4.9503	130.4
Nov	.0750	95.9	4.2048	124.9	4.9416	137.4	4.9470	137.7	4.9500	130.4
Dec	.0750	95.9	4.2047	124.9	4.9450	137.5	4.9500	137.7	4.9503	130.4
Average, 1907	.0741	94.8	4.2040	124.9	4.8204	134.1	4.8211	134.2	4.8215	127.1

Month.	Coal: bituminous, Georges Creek (at mine).		Coal: bituminous Georges Creek (f. o. b. N. Y. Harbor).		Coal: bituminous, Pittsburg (Youghiogheny).		Coke: Connellsville, furnace		Matches: parlor, domestic.	
	Price per ton	Relative price	Price per ton	Relative price	Price per bushel	Relative price	Price per ton	Relative price	Price per gross of boxes (200s).	Relative price.
Average, 1890-1899	$0.8887	100.0	$2.7429	100.0	$0.0643	100.0	$1.6983	100.0	$1.7563	100.0
Jan	1.5000	168.8	3.2000	116.7	.0800	124.4	3.5500	209.0	1.5000	85.4
Feb	1.5000	168.8	3.2000	116.7	.0800	124.4	3.5750	210.5	1.5000	85.4
Mar	1.5000	168.8	3.2000	116.7	.0800	124.4	3.2500	191.4	1.5000	85.4
Apr	1.5000	168.8	3.2000	116.7	.0800	124.4	2.8000	164.9	1.5000	85.4
May	1.5000	168.8	3.2000	116.7	.0800	124.4	2.8000	164.9	1.5000	85.4
June	1.5000	168.8	3.2000	116.7	.0800	124.4	2.3250	136.9	1.5000	85.4
July	1.5000	168.8	3.2000	116.7	.0800	124.4	2.5000	147.2	1.5000	85.4
Aug	1.5000	168.8	3.2000	116.7	.0800	124.4	2.6250	154.6	1.5000	85.4
Sept	1.4500	163.2	3.1500	114.8	.0825	128.3	2.7750	163.4	1.5000	85.4
Oct	1.7500	196.9	3.4500	125.8	.0850	132.2	2.9500	173.7	1.5000	85.4
Nov	1.7500	196.9	3.4500	125.8	.0900	140.0	2.7500	161.9	1.5000	85.4
Dec	1.5000	168.8	3.2000	116.7	.0900	140.0	2.0000	117.8	1.5000	85.4
Average, 1907	1.5375	173.0	3.2375	118.0	.0824	128.1	2.8250	166.3	1.5000	85.4

Month.	Fuel and lighting.						Metals and implements.			
	Petroleum, crude.		Petroleum refined, for export.		Petroleum refined, 150° fire test, w. w.		Augers: extra, ¾-inch.		Axes: M. C. O., Yankee.	
	Price per barrel.	Relative price.	Price per gallon.	Relative price.	Price per gallon.	Relative price.	Price per auger.	Relative price.	Price per ax.	Relative price.
Average, 1890-1899	$0.9102	100.0	$0.0649	100.0	$0.0890	100.0	$0.1608	100.0	$0.4693	100.0
Jan	1.5800	173.6	.0750	115.6	.1300	146.1	.3600	223.9	.6800	144.9
Feb	1.5800	173.6	.0775	119.4	.1350	151.7	.3600	223.9	.6800	144.9
Mar	1.6300	179.1	.0775	119.4	.1350	151.7	.3600	223.9	.6800	144.9
Apr	1.7800	195.6	.0820	126.3	.1350	151.7	.3600	223.9	.6800	144.9
May	1.7800	195.6	.0820	126.3	.1350	151.7	.3600	223.9	.6800	144.9
June	1.7800	195.6	.0820	126.3	.1350	151.7	.3600	223.9	.6800	144.9
July	1.7800	195.6	.0845	130.2	.1350	151.7	.3600	223.9	.6800	144.9
Aug	1.7800	195.6	.0845	130.2	.1350	151.7	.3600	223.9	.6800	144.9
Sept	1.7800	195.6	.0845	130.2	.1350	151.7	.3600	223.9	.6800	144.9
Oct	1.7800	195.6	.0845	130.2	.1350	151.7	.3600	223.9	.6800	144.9
Nov	1.7800	195.6	.0875	134.8	.1350	151.7	.3600	223.9	.6800	144.9
Dec	1.7800	195.6	.0875	134.8	.1350	151.7	.3600	223.9	.6800	144.9
Average, 1907	1.7342	190.5	.0824	127.0	.1346	151.2	.3600	223.9	.6800	144.9

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Metals and implements.									
	Bar iron: best refined, from store (Philadelphia market).		Bar iron: common to best refined (Pittsburg market).		Barb wire: galvanized.		Butts: loose joint, cast, 3 x 3 inch.		Chisels: extra, socket firmer, 1-inch.	
	Price per pound.	Relative price.	Price per pound	Relative price.	Price per 100 pounds.	Relative price	Price per pair.	Relative price	Price per chisel.	Relative price.
Average, 1890-1899	$0.0164	100.0	[a]$0.0145	100.0	$2.5261	100.0	$0.0316	100.0	$0.1894	100.0
Jan	.0208	126.8	.0183	[b]137.3	2.6000	102.9	.0400	126.6	.4500	237.6
Feb	.0216	131.7	.0180	[b]135.1	2.6000	102.9	.0400	126.6	.4500	237.6
Mar	.0216	131.7	.0180	[b]135.1	2.6000	102.9	.0400	126.6	.4500	237.6
Apr	.0216	131.7	.0180	[b]135.1	2.6000	102.9	.0400	126.6	.4500	237.6
May	.0216	131.7	.0180	[b]135.1	2.6000	102.9	.0400	126.6	.4500	237.6
June	.0216	131.7	.0178	[b]133.6	2.6300	104.1	.0400	126.6	.4500	237.6
July	.0216	131.7	.0173	[b]129.8	2.6300	104.1	.0400	126.6	.4500	237.6
Aug	.0216	131.7	.0173	[b]129.8	2.6300	104.1	.0400	126.6	.4500	237.6
Sept	.0216	131.7	.0170	[b]127.6	2.6800	106.1	.0400	126.6	.4500	237.6
Oct	.0206	125.6	.0170	[b]127.6	2.6800	106.1	.0400	126.6	.4500	237.6
Nov	.0196	119.5	.0170	[b]127.6	2.6800	106.1	.0400	126.6	.4500	237.6
Dec	.0196	119.5	.0160	[b]120.0	2.6800	106.1	.0400	126.6	.3750	198.0
Average, 1907	.0211	128.7	.0175	[b]131.3	2.6342	104.3	.0400	126.6	.4438	234.3

Month.	Copper: ingot, lake.		Copper: sheet, hot-rolled (base sizes).		Copper: wire, bare.		Doorknobs: steel, bronze plated.		Files: 8-inch mill bastard.	
	Price per pound.	Relative price.	Price per pound.	Relative price	Price per pound.	Relative price.	Price per pair.	Relative price	Price per dozen.	Relative price.
Average, 1890-1899	$0.1234	100.0	$0.1659	100.0	$0.1464	100.0	$0.1697	100.0	$0.8527	100.0
Jan	.2388	193.5	.2900	174.8	.2550	174.2	.4500	265.2	1.0100	118.4
Feb	.2513	203.6	.3000	180.8	.2750	187.8	.4500	265.2	1.0100	118.4
Mar	.2550	206.6	.3200	192.9	.2750	187.8	.4500	265.2	1.0100	118.4
Apr	.2475	200.6	.3200	192.9	.2750	187.8	.4500	265.2	1.0000	117.3
May	.2550	206.6	.3200	192.9	.2750	187.8	.4500	265.2	1.0000	117.3
June	.2463	199.6	.3200	192.9	.2750	187.8	.4500	265.2	1.0000	117.3
July	.2388	193.5	.3200	192.9	.2750	187.8	.4500	265.2	1.0000	117.3
Aug	.2000	162.1	.2800	168.8	.2450	167.3	.4500	265.2	1.0000	117.3
Sept	.1813	146.9	.2800	168.8	.2450	167.3	.4500	265.2	.9900	116.1
Oct	.1513	122.6	.2000	120.6	.1625	111.0	.4500	265.2	.9900	116.1
Nov	.1450	117.5	.2000	120.6	.1600	109.3	.4500	265.2	.9800	114.9
Dec	.1400	113.5	.2000	120.6	.1650	112.7	.4500	265.2	.9800	114.9
Average, 1907	.2125	172.2	.2792	168.3	.2402	164.1	.4500	265.2	.9975	117.0

Month.	Hammers: Maydole No. 1½.		Lead: pig.		Lead: pipe.		Locks: common mortise.		Nails: cut, 8-penny, fence and common.	
	Price per hammer.	Relative price.	Price per pound.	Relative price.	Price per 100 lbs.	Relative price.	Price per lock.	Relative price	Price per 100 lbs.	Relative price.
Average, 1890-1899	$0.3613	100.0	$0.0381	100.0	$4.8183	100.0	$0.0817	100.0	$1.8275	100.0
Jan	.4660	129.0	.0630	165.4	7.2000	149.4	.2000	244.8	2.1500	117.6
Feb	.4660	129.0	.0633	166.1	7.2000	149.4	.2000	244.8	2.1500	117.6
Mar	.4660	129.0	.0638	167.5	7.2000	149.4	.2000	244.8	2.1500	117.6
Apr	.4660	129.0	.0623	163.5	7.2000	149.4	.2000	244.8	2.1500	117.6
May	.4660	129.0	.0610	160.1	7.2000	149.4	.2000	244.8	2.1500	117.6
June	.4660	129.0	.0578	151.7	6.8400	142.0	.2000	244.8	2.1500	117.6
July	.4660	129.0	.0525	137.8	6.8400	142.0	.2000	244.8	2.1500	117.6
Aug	.4660	129.0	.0515	135.2	6.4800	134.5	.2000	244.8	2.2000	120.4
Sept	.4660	129.0	.0520	136.5	6.4800	134.5	.2000	244.8	2.2500	123.1
Oct	.4660	129.0	.0468	122.8	6.1200	127.0	.2000	244.8	2.2000	120.4
Nov	.4660	129.0	.0460	120.7	6.1200	127.0	.2000	244.8	2.1250	116.3
Dec	.4660	129.0	.0425	111.5	5.5800	115.8	.2000	244.8	2.1250	116.3
Average, 1907	.4660	129.0	.0552	144.9	6.7050	139.2	.2000	244.8	2.1625	118.3

[a] Bar iron, best refined, from mill (Pittsburg market).

[b] For method of computing relative price, see pages 327 and 328; average price for 1906, $0.0169.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890–1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Metals and implements.									
	Nails: wire, 8-penny, fence and common.		Pig iron: Bessemer.		Pig iron: foundry No. 1.		Pig iron: foundry No. 2.		Pig iron: gray forge, southern, coke.	
	Price per 100 lbs.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.
Average, 1890–1899..	$2.1618	100.0	$13.7783	100.0	$14.8042	100.0	$13.0533	100.0	$11.0892	100.0
Jan..........	2.1000	97.1	23.3500	169.5	27.5000	185.8	25.6000	196.1	23.2500	209.7
Feb..........	2.1000	97.1	23.2500	168.7	27.3700	184.9	25.6000	196.1	23.2500	209.7
Mar..........	2.1000	97.1	22.9500	166.6	26.8700	181.5	24.8500	190.4	22.6000	203.8
Apr..........	2.1000	97.1	23.5500	170.9	26.5600	179.4	25.1000	192.3	23.2500	209.7
May..........	2.1000	97.1	24.0500	174.5	26.6000	179.7	25.3500	194.2	22.0000	198.4
June..........	2.1000	97.1	24.5000	177.8	25.7500	173.9	26.6500	204.2	22.0000	198.4
July..........	2.1000	97.1	23.8000	172.7	23.6200	159.5	25.9000	198.4	22.0000	198.4
Aug..........	2.1000	97.1	22.9500	166.6	22.5000	152.0	23.9000	183.1	21.0000	189.4
Sept..........	2.1500	99.5	22.8500	165.8	21.1900	143.1	22.9000	175.4	19.2500	173.6
Oct..........	2.1500	99.5	22.9000	166.2	20.4000	137.8	21.2750	163.0	19.0000	171.3
Nov..........	2.1500	99.5	20.3500	147.7	19.4400	131.3	20.1500	154.4	17.7500	160.1
Dec..........	2.1500	99.5	19.6000	142.3	18.9400	127.9	19.1500	146.7	16.5000	148.8
Average, 1907......	2.1167	97.9	22.8417	165.8	23.8950	161.4	23.8688	182.9	20.9875	189.3

Month.	Planes: Bailey No. 5.		Quicksilver.		Saws: cross-cut, Disston.		Saws: hand, Disston No. 7.		Shovels: Ames No. 2.	
	Price per plane.	Relative price.	Price per pound.	Relative price.	Price per saw.	Relative price.	Price per dozen.	Relative price.	Price per dozen.	Relative price.
Average, 1890–1899..	$1.3220	100.0	$0.5593	100.0	$1.6038	100.0	$12.7800	100.0	$7.8658	100.0
Jan..........	1.5300	115.7	.5400	96.5	1.6038	100.0	12.9500	101.3	7.8400	99.7
Feb..........	1.5300	115.7	.5400	96.5	1.6038	100.0	12.9500	101.3	7.8400	99.7
Mar..........	1.5300	115.7	.5400	96.5	1.6038	100.0	12.9500	101.3	7.8400	99.7
Apr..........	1.5300	115.7	.5300	94.8	1.6038	100.0	12.9500	101.3	7.8400	99.7
May..........	1.5300	115.7	.5300	94.8	1.6038	100.0	12.9500	101.3	7.8400	99.7
June..........	1.5300	115.7	.5300	94.8	1.6038	100.0	12.9500	101.3	7.8400	99.7
July..........	1.5300	115.7	.5150	92.1	1.6038	100.0	12.9500	101.3	7.8400	99.7
Aug..........	1.5300	115.7	.5150	92.1	1.6038	100.0	12.9500	101.3	7.8400	99.7
Sept..........	1.5300	115.7	.5150	92.1	1.6038	100.0	12.9500	101.3	7.8400	99.7
Oct..........	1.5300	115.7	.5400	96.5	1.6038	100.0	12.9500	101.3	7.8400	99.7
Nov..........	1.5300	115.7	.6100	109.1	1.6038	100.0	12.9500	101.3	7.8400	99.7
Dec..........	1.5300	115.7	.6100	109.1	1.6038	100.0	12.9500	101.3	7.8400	99.7
Average, 1907......	1.5300	115.7	.5429	97.1	1.6038	100.0	12.9500	101.3	7.8400	99.7

Month.	Silver: bar, fine.		Spelter: western.		Steel billets.		Steel rails.		Steel sheets: black, No. 27.	
	Price per ounce.	Relative price.	Price per pound.	Relative price.	Price per ton.	Relative price.	Price per ton.	Relative price.	Price per pound.	Relative price.
Average, 1890–1899..	$0.74899	100.0	$0.0452	100.0	$21.5262	100.0	$26.0654	100.0	[a]$0.0224	100.0
Jan..........	.69333	92.6	.0668	147.8	29.4000	136.6	28.0000	107.4	.0250	111.6
Feb..........	.69437	92.7	.0713	157.7	29.5000	137.0	28.0000	107.4	.0250	111.6
Mar..........	.68110	90.9	.0695	153.8	29.0000	134.7	28.0000	107.4	.0250	111.6
Apr..........	.66062	88.2	.0688	152.2	30.2500	140.5	28.0000	107.4	.0250	111.6
May..........	.66648	89.0	.0663	146.7	30.3000	140.8	28.0000	107.4	.0250	111.6
June..........	.67820	90.5	.0650	143.8	29.6200	137.6	28.0000	107.4	.0250	111.6
July..........	.68759	91.8	.0638	141.2	30.0000	139.4	28.0000	107.4	.0250	111.6
Aug..........	.69415	92.7	.0585	129.4	29.4000	136.6	28.0000	107.4	.0250	111.6
Sept..........	.68430	91.4	.0553	122.3	29.3700	136.4	28.0000	107.4	.0250	111.6
Oct..........	.63111	84.3	.0540	119.5	28.2000	131.0	28.0000	107.4	.0250	111.6
Nov..........	.59403	79.3	.0550	121.7	28.0000	130.1	28.0000	107.4	.0250	111.6
Dec..........	.55215	73.7	.0463	102.4	28.0000	130.1	28.0000	107.4	.0250	111.6
Average, 1907......	.65079	88.1	.0617	136.5	29.2533	135.9	28.0000	107.4	.0250	111.6

[a] Average for the period July, 1894, to December, 1899.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Metals and implements.									
	Tin: pig.		Tin plates: domestic, Bessemer, coke, 14 x 20 inch.		Trowels: M. C. O., brick, 10½-inch.		Vises: solid box, 50-pound.		Wood screws: 1-inch, No. 10, flat head.	
	Price per pound.	Relative price.	Price per 100 pounds	Relative price.	Price per trowel	Relative price.	Price per vise.	Relative price	Price per gross.	Relative price.
Average, 1890-1899..	$0.1836	100.0	[a]$3.4148	100.0	$0.3400	100.0	$3.9009	100.0	$0.1510	100.0
Jan....	.4185	227.9	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Feb.	.4250	231.5	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Mar........	.4190	228.2	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Apr	.4000	217.9	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
May....	.4305	234.5	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
June .	.4150	226.0	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
July....	.4288	233.6	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Aug.....	.3880	211.3	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Sept....	.3713	202.2	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Oct...	.3470	189.0	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Nov......	.3060	166.7	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Dec.	.3010	163.9	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7
Average, 1907.	.3875	211.1	4.0900	119.8	.3400	100.0	5.7500	147.4	.1219	80.7

Month.	Metals and implements		Lumber and building materials							
	Zinc: sheet		Brick: common domestic.		Carbonate of lead: American, in oil.		Cement: Portland, domestic		Cement: Rosendale.	
	Price per 100 pounds	Relative price	Price per M.	Relative price	Price per pound	Relative price.	Price per barrel.	Relative price	Price per barrel.	Relative price.
Average, 1890-1899 .	$5.3112	100.0	$5.5625	100.0	$0.0577	100.0	[b]$1.9963	100.0	$0.8871	100.0
Jan....	7.5900	142.9	6.2500	112.4	.0735	127.4	1.6500	82.7	.9500	107.1
Feb......	7.7300	145.5	6.3750	114.6	.0686	118.9	1.6500	82.7	.9500	107.1
Mar	7.8200	147.2	6.3750	114.6	.0686	118.9	1.6500	82.7	.9500	107.1
Apr	7.9100	148.9	5.2500	94.4	.0711	123.2	1.6500	82.7	.9500	107.1
May.....	7.9100	148.9	5.8750	105.6	.0711	123.2	1.6500	82.7	.9500	107.1
June..	7.9100	148.9	7.5000	134.8	.0711	123.2	1.6500	82.7	.9500	107.1
July....	7.9100	148.9	6.5000	116.9	.0711	123.2	1.6500	82.7	.9500	107.1
Aug.......	7.6800	144.6	6.5000	116.9	.0711	123.2	1.7000	85.2	.9500	107.1
Sept....	7.1300	134.2	6.1250	110.1	.0711	123.2	1.7000	85.2	.9500	107.1
Oct ..	6.9000	129.9	5.8750	105.6	.0662	114.7	1.7000	85.2	.9500	107.1
Nov......	6.9000	129.9	5.7500	103.4	.0662	114.7	1.5500	77.6	.9500	107.1
Dec.....	6.4400	121.3	5.5000	98.9	.0662	114.7	1.5500	77.6	.9500	107.1
Average, 1907.	7.4858	140.9	6.1563	110.7	.0697	120.8	1.6458	82.4	.9500	107.1

Month.	Lumber and building materials.									
	Doors: western white pine.		Hemlock.		Lime: common.		Linseed oil: raw.		Maple: hard.	
	Price per door.	Relative price.	Price per M feet.	Relative price.	Price per barrel.	Relative price.	Price per gallon.	Relative price.	Price per M feet.	Relative price.
Average, 1890-1899..	[c]$1.0929	100.0	$11.9625	100.0	$0.8332	100.0	$0.4535	100.0	$26.5042	100.0
Jan.....	1.8900	[d]168.0	22.2500	186.0	1.0200	122.4	.4100	90.4	31.0000	117.0
Feb.......	1.8900	[d]168.0	22.2500	186.0	1.0200	122.4	.4100	90.4	31.0000	117.0
Mar.....	1.8900	[d]168.0	22.2500	186.0	1.0200	122.4	.4100	90.4	32.5000	122.6
Apr.......	1.8900	[d]168.0	22.2500	186.0	1.0200	122.4	.4100	90.4	32.5000	122.6
May.........	1.8900	[d]168.0	22.2500	186.0	.8950	107.4	.4100	90.4	32.5000	122.6
June.........	1.8900	[d]168.0	22.2500	186.0	.8950	107.4	.4400	97.0	32.5000	122.6
July..........	1.8900	[d]168.0	22.2500	186.0	.8950	107.4	.4500	99.2	32.5000	122.6
Aug	1.8900	[d]168.0	22.2500	186.0	.8950	107.4	.4300	94.8	32.5000	122.6
Sept	1.8900	[d]168.0	22.2500	186.0	.8950	107.4	.4300	94.8	32.5000	122.6
Oct....	1.9500	[d]173.3	22.2500	186.0	.8950	107.4	.4700	103.6	32.5000	122.6
Nov............	1.9500	[d]173.3	22.2500	186.0	.8950	107.4	.4900	108.0	32.5000	122.6
Dec............	1.7000	[d]151.1	22.2500	186.0	1.0450	125.4	.4500	99.2	32.5000	122.6
Average, 1907.... ..	1.8842	[d]167.5	22.2500	186.0	.9492	113.9	.4342	95.7	32.2500	121.7

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[a] Average for 1896-1899.

[b] Average for 1895-1899.

[c] Doors: pine, unmolded, 2 feet 8 inches by 6 feet 8 inches, 1⅜ inches thick.

[d] For method of computing relative price, see pages 327 and 328; average price for 1906, $1.7271.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890–1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Lumber and building materials.									
	Oak: white, plain.		Oak: white, quartered.		Oxide of zinc.		Pine: white, boards, No 2 barn (N Y. market).		Pine: white, boards, uppers (N. Y. market).	
	Price per M feet.	Relative price	Price per M feet.	Relative price.	Price per pound.	Relative price.	Price per M feet.	Relative price.	Price per M feet.	Relative price.
Average, 1890–1899	$37.4292	100.0	$53.6771	100.0	$0.0400	100.0	$[a]17.1104	100.0	$[b]46.5542	100.0
Jan.	51.0000	136.3	80.0000	149.0	.0538	134.5	36.7500	[c]192.2	94.5000	[d]194.9
Feb.	53.0000	141.6	80.0000	149.0	.0538	134.5	36.7500	[c]192.2	94.5000	[d]194.9
Mar.	55.0000	146.9	80.0000	149.0	.0538	134.5	36.7500	[c]192.2	96.5000	[d]199.0
Apr.	55.0000	146.9	80.0000	149.0	.0538	134.5	36.7500	[c]192.2	96.5000	[d]199.0
May	61.5000	164.3	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	97.5000	[d]201.1
June	57.5000	153.6	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	97.5000	[d]201.1
July	57.5000	153.6	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	97.5000	[d]201.1
Aug.	56.0000	149.6	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	97.5000	[d]201.1
Sept.	54.0000	144.3	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	97.5000	[d]201.1
Oct.	54.0000	144.3	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	98.5000	[d]203.1
Nov.	54.0000	144.3	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	98.5000	[d]203.1
Dec.	54.0000	144.3	80.0000	149.0	.0538	134.5	37.7500	[c]197.4	98.5000	[d]203.1
Average, 1907	55.2083	147.5	80.0000	149.0	.0538	134.5	37.4167	[c]195.7	97.0833	[d]200.2

Month.	Pine: yellow		Plate glass: polished, glazing area 3 to 5 sq. ft.		Plate glass polished, glazing, area 5 to 10 sq. ft.		Poplar.		Putty.	
	Price per M feet.	Relative price	Price per sq. foot.	Relative price	Price per sq. foot.	Relative price.	Price per M feet.	Relative price.	Price per pound.	Relative price.
Average, 1890–1899	$18.4646	100.0	[e]$0.3630	100.0	[f]$0.5190	100.0	$31.3667	100.0	$0.0158	100.0
Jan.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	53.5000	170.6	.0120	75.9
Feb.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	53.5000	170.6	.0120	75.9
Mar.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	58.0000	184.9	.0120	75.9
Apr.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	58.0000	184.9	.0120	75.9
May	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	61.5000	196.1	.0120	75.9
June	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	57.5000	183.3	.0120	75.9
July	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	57.5000	183.3	.0120	75.9
Aug.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	59.5000	189.7	.0120	75.9
Sept.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	59.5000	189.7	.0120	75.9
Oct.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	59.5000	189.7	.0120	75.9
Nov.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	59.5000	189.7	.0120	75.9
Dec.	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	59.5000	189.7	.0120	75.9
Average, 1907	30.5000	165.2	.2300	[g]77.2	.3400	[h]80.1	58.0833	185.2	.0120	75.9

Month.	Resin: good, strained		Shingles: cypress.		Shingles: red cedar, random width, 16-inch.		Spruce.		Tar.	
	Price per barrel.	Relative price.	Price per M.	Relative price.	Price per M.	Relative price.	Price per M feet.	Relative price.	Price per barrel.	Relative price.
Average, 1890–1899	$1.4399	100.0	$2.8213	100.0	[i]$3.7434	100.0	$14.3480	100.0	$1.2048	100.0
Jan.	4.2500	295.2	3.8500	136.5	2.5000	[j]177.6	25.0000	174.2	2.3500	195.1
Feb.	4.4500	309.0	3.8500	136.5	2.7500	[j]195.4	25.0000	174.2	2.3000	190.9
Mar.	4.4250	307.3	4.3500	154.2	2.7500	[j]195.4	25.0000	174.2	2.3000	190.9
Apr.	4.5500	316.0	4.3500	154.2	2.9000	[j]206.0	25.0000	174.2	2.8000	232.4
May	4.8000	333.4	4.3500	154.2	3.0000	[j]213.2	25.0000	174.2	2.3000	190.9
June	4.8000	333.4	4.3500	154.2	2.6000	[j]184.7	25.0000	174.2	2.4000	199.2
July	4.4250	307.3	4.3500	154.2	3.0000	[j]213.2	25.0000	174.2	2.5000	207.5
Aug.	4.5000	312.5	4.3500	154.2	3.1000	[j]220.3	25.0000	174.2	2.5000	207.5
Sept.	4.3500	302.1	4.3500	154.2	3.0000	[j]213.2	25.0000	174.2	2.3000	190.9
Oct.	4.2250	293.4	4.3500	154.2	2.7500	[j]195.4	21.0000	146.4	2.3000	190.9
Nov.	4.2000	291.7	4.1000	145.3	2.0000	[j]142.1	21.0000	146.4	2.3000	190.9
Dec.	3.5500	246.5	4.1000	145.3	2.0000	[j]142.1	21.0000	146.4	1.6000	132.8
Average, 1907	4.3771	304.0	4.2250	149.8	2.6958	[j]191.5	24.0000	167.3	2.3292	193.3

[a] Pine, white, boards, No. 2 barn, 1 inch by 10 inches wide, rough (Buffalo market).

[b] Pine, white, boards, uppers, 1 inch, 8 inches and up wide, rough (Buffalo market).

[c] For method of computing relative price, see pages 327 and 328, average price for 1906, $33.25.

[d] For method of computing relative price, see pages 327 and 328, average price for 1906, $88.25.

[e] Plate glass: polished, unsilvered, area 3 to 5 square feet.

[f] Plate glass: polished, unsilvered, area 5 to 10 square feet.

[g] For method of computing relative price, see pages 327 and 328; average price for 1906, $0.2267.

[h] For method of computing relative price, see pages 327 and 328; average price for 1906, $0.3300.

[i] Shingles: white pine, 18-inch, XXXX.

[j] For method of computing relative price, see pages 327 and 328; average price for 1906, $2.2125.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890–1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	Lumber and building materials.						Drugs and chemicals.			
	Turpentine: spirits of.		Window glass: American, single, firsts, 6 x 8 to 10 x 15 inch.		Window glass: American, single, thirds, 6 x 8 to 10 x 15 inch.		Alcohol: grain		Alcohol: wood, refined, 95 per cent.	
	Price per gallon.	Relative price	Price per 50 sq. ft.	Relative price.	Price per 50 sq. ft.	Relative price.	Price per gallon.	Relative price.	Price per gallon	Relative price.
Average, 1890–1899..	$0.3343	100 0	$2 1514	100 0	$1 8190	100 0	$2.2405	100.0	$0 9539	100 0
Jan............	.7100	212 4	2 8800	133 9	2 2950	126 2	2.4650	110 0	.4000	41 9
Feb............	.7400	221 4	2 8800	133 9	2 2950	126 2	2 4650	110 0	.4000	41 9
Mar............	.7550	225 8	2 8800	133.9	2 2950	126 2	2.4650	110 0	.4000	41 9
Apr............	.7300	218 4	2 8800	133 9	2 2950	126 2	2 4650	110 0	.4000	41.9
May............	.6750	201.9	2 8800	133 9	2 2950	126 2	2 4650	110 0	.4000	41 9
June............	.6400	191 4	2 8800	133 9	2 2950	126 2	2 5300	112.9	.4000	41 9
July............	.6100	182.5	2 8800	133 9	2 2950	126 2	2 5300	112 9	.4000	41.9
Aug............	.5900	176 5	2.7200	126 4	2 1675	119 2	2 5300	112 9	.4000	41.9
Sept............	.5825	174 2	2 7200	126 4	2.1675	119 2	2 5300	112 9	.4000	41.9
Oct............	.5500	164.5	2 7200	126 4	2 1675	119 2	2 5900	115 6	.4000	41 9
Nov............	.5400	161 5	2 7200	126 4	2 1675	119 2	2 6100	116 5	.4000	41 9
Dec............	.4900	146 6	2.7200	126 4	2 1675	119 2	2 6300	117 4	.3900	40 9
Average, 1907.......	.6344	189.8	2 8133	130 8	2 2419	123 2	2 5229	112.6	.3992	41.8

Month.	Drugs and chemicals.									
	Alum: lump.		Brimstone: crude, seconds		Glycerin: refined.		Muriatic acid: 20°.		Opium: natural, in cases.	
	Price per pound.	Relative price.	Price per ton	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890–1899..	$0.0167	100.0	$20 6958	100 0	$0.1399	100 0	$0 0104	100.0	$2 3602	100 0
Jan............	.0175	104 8	22.5000	108.7	.1175	84.0	.0135	129.8	3.5500	150.4
Feb............	.0175	104.8	22.1250	106.9	.1200	85.8	.0135	129.8	3.5500	150.4
Mar............	.0175	104.8	22.1250	106.9	.1300	92 9	.0135	129.8	3 4500	146.2
Apr............	.0175	101.8	22.1250	106 9	.1300	92.9	.0135	129.8	4 0000	169.5
May............	.0175	104 8	22.1250	106.9	.1325	94.7	.0135	129.8	4.0000	169.5
June............	.0175	104 8	22.1250	106.9	.1350	96.5	.0135	129.8	3.8000	161.0
July............	.0175	104 8	22.1250	106.9	.1375	98.3	.0135	129.8	4.7500	201.3
Aug............	.0175	104 8	22.1250	106.9	.1425	101 9	.0135	129.8	7.0000	296.6
Sept............	.0175	104.8	22.1250	106.9	.1425	101.9	.0135	129.8	7 0000	296.6
Oct............	.0175	104 8	19.5000	94.2	.1550	110.8	.0135	129.8	6.5000	275.4
Nov............	.0175	104 8	19.5000	94.2	.1575	112.6	.0135	129.8	6 2500	264.8
Dec............	.0175	104 8	19 5000	94.2	.1600	114 4	.0135	129.8	5.5000	233.0
Average, 1907....	.0175	104 8	21.4983	103 9	.1383	98.9	.0135	129.8	4.9458	209.6

Month.	Drugs and chemicals.				House furnishing goods.					
	Quinine: American.		Sulphuric acid: 66°.		Earthenware: plates, cream-colored.		Earthenware: plates, white granite.		Earthenware: teacups and saucers, white granite.	
	Price per ounce.	Relative price.	Price per pound.	Relative price.	Price per dozen.	Relative price.	Price per dozen.	Relative price.	Price per gross (6 dozen cups and 6 dozen saucers).	Relative price.
Average, 1890–1899..	$0 2460	100 0	$0 0089	100 0	$0 4136	100 0	$0 4479	100 0	$3 4292	100.0
Jan............	1900	77 2	.0100	112 4	.4410	106.6	.4586	102 4	3 3869	98 8
Feb............	2200	89 4	.0100	112.4	.4410	106 6	.4586	102 4	3.3869	98.8
Mar............	2100	85 4	.0100	112.4	.4410	106 6	.4586	102 4	3 3869	98.8
Apr............	.1900	77 2	0100	112.4	.4410	106.6	.4586	102 4	3 3869	98.8
May............	.1800	73 2	0100	112.4	4410	106 6	.4586	102 4	3 3869	98.8
June............	.1800	73 2	.0100	112.4	.4410	106.6	.4586	102 4	3 3869	98.8
July............	1600	65 0	.0100	112.4	.4410	106.6	.4586	102.4	3.3869	98.8
Aug............	.1600	65 0	.0100	112.4	.4410	106.6	.4586	102.4	3.3869	98.8
Sept............	.1600	65 0	.0100	112 4	.4410	106.6	.4586	102.4	3 3869	98.8
Oct............	.1600	65 0	.0100	112.4	.4410	106 6	.4586	102.4	3.3869	98.8
Nov............	.1600	65 0	.0100	112.4	.4410	106.6	.4586	102.4	3 3869	98.8
Dec............	.1600	65 0	.0100	112.4	.4410	106 6	.4586	102.4	3 3869	98.8
Average, 1907.......	.1775	72.2	.0100	112.4	.4410	106.6	.4586	102 4	3.3869	98.8

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

[Average for 1907 computed from quotations in Table I.]

Month.	House furnishing goods.									
	Furniture: bedroom sets, ash.		Furniture: chairs, bedroom, maple.		Furniture: chairs, kitchen.		Furniture: tables, kitchen.		Glassware: nappies, 4-inch.	
	Price per set.	Relative price.	Price per dozen.	Relative price.	Price per dozen.	Relative price.	Price per dozen.	Relative price.	Price per dozen.	Relative price.
Average, 1890-1899	$10.555	100.0	$6.195	100.0	$3.8255	100.0	$14.435	100.0	$0.1120	100.0
Jan	14.500	137.4	10.000	161.4	5.5000	143.8	18.000	124.7	.1400	125.0
Feb	14.500	137.4	10.000	161.4	5.5000	143.8	18.000	124.7	.1400	125.0
Mar	14.500	137.4	10.000	161.4	5.5000	143.8	18.000	124.7	.1400	125.0
Apr	14.500	137.4	10.000	161.4	5.5000	143.8	18.000	124.7	.1400	125.0
May	14.500	137.4	10.000	161.4	5.5000	143.8	18.000	124.7	.1400	125.0
June	14.500	137.4	10.000	161.4	6.0000	156.8	18.000	124.7	.1400	125.0
July	14.500	137.4	10.000	161.4	6.0000	156.8	18.000	124.7	.1400	125.0
Aug	14.500	137.4	10.000	161.4	6.0000	156.8	18.000	124.7	.1400	125.0
Sept	14.500	137.4	10.000	161.4	6.0000	156.8	18.000	124.7	.1400	125.0
Oct	14.500	137.4	10.000	161.4	6.0000	156.8	18.000	124.7	.1400	125.0
Nov	14.500	137.4	10.000	161.4	6.0000	156.8	18.000	124.7	.1400	125.0
Dec	14.500	137.4	10.000	161.4	6.0000	156.8	18.000	124.7	.1400	125.0
Average, 1907	14.500	137.4	10.000	161.4	5.7917	151.4	18.000	124.7	.1400	125.0

Month.	Glassware: pitchers, ½-gallon, common		Glassware: tumblers, ⅓-pint, common.		Table cutlery: carvers, stag handles.		Table cutlery: knives and forks, cocobolo handles.		Wooden ware: pails, oak-grained.	
	Price per dozen.	Relative price.	Price per dozen.	Relative price.	Price per pair.	Relative price.	Price per gross.	Relative price.	Price per doz.	Relative price.
Average, 1890-1899	$1.175	100.0	$0.1775	100.0	$0.80	100.0	$6.0600	100.0	$1.2988	100.0
Jan	1.050	89.4	.1500	84.5	.75	93.8	6.3000	104.0	1.7000	130.9
Feb	1.050	89.4	.1500	84.5	.75	93.8	6.3000	104.0	1.7000	130.9
Mar	1.050	89.4	.1500	84.5	.75	93.8	6.3000	104.0	1.9500	150.1
Apr	1.050	89.4	.1500	84.5	.75	93.8	6.6000	108.9	1.9500	150.1
May	1.050	89.4	.1500	84.5	.75	93.8	6.6000	108.9	1.9500	150.1
June	1.050	89.4	.1500	84.5	.75	93.8	6.6000	108.9	1.9500	150.1
July	1.050	89.4	.1500	84.5	.85	106.3	6.6000	108.9	1.9500	150.1
Aug	1.050	89.4	.1500	84.5	.85	106.3	6.6000	108.9	2.1000	161.7
Sept	1.050	89.4	.1500	84.5	.85	106.3	6.6000	108.9	2.1000	161.7
Oct	1.050	89.4	.1500	84.5	.85	106.3	6.6000	108.9	2.1000	161.7
Nov	1.050	89.4	.1500	84.5	.85	106.3	6.3500	104.8	2.1000	161.7
Dec	1.050	89.4	.1500	84.5	.85	106.3	6.3500	104.8	2.1000	161.7
Average, 1907	1.050	89.4	.1500	84.5	.80	100.0	6.4833	107.0	1.9708	151.7

Month.	House furnishing goods.		Miscellaneous.							
	Wooden ware: tubs, oak-grained.		Cotton-seed meal.		Cotton-seed oil summer yellow, prime.		Jute raw, M-double triangle, shipment.		Malt. western made.	
	Price per nest of 3.	Relative price.	Price per ton of 2,000 lbs.	Relative price.	Price per gallon.	Relative price.	Price per pound.	Relative price	Price per bushel.	Relative price.
Average, 1890-1899	$1.3471	100.0	$21.9625	100.0	$0.3044	100.0	[a]$0.0359	100.0	$0.7029	100.0
Jan	1.4500	107.6	29.6000	134.8	.4050	133.0	.0625	[b]237.1	.7600	108.1
Feb	1.4500	107.6	28.6000	130.2	.4350	142.9	.0513	[b]194.6	.7900	112.4
Mar	1.6000	118.8	28.3500	129.1	.4850	159.3	.0575	[b]218.2	.9500	135.2
Apr	1.6000	118.8	27.6000	125.7	.4650	152.8	.0588	[b]223.1	.9500	135.2
May	1.6000	118.8	26.6000	121.1	.4875	160.2	.0563	[b]213.6	1.0600	150.8
June	1.6000	118.8	27.6000	125.7	.5650	185.6	.0500	[b]189.7	1.0500	149.4
July	1.6500	122.5	28.8500	131.4	.5800	190.5	.0500	[b]189.7	1.0250	145.8
Aug	1.6500	122.5	28.3500	129.1	.5700	187.3	.0413	[b]156.7	1.0250	145.8
Sept	1.6500	122.5	29.1000	132.5	.5650	185.6	.0400	[b]151.8	1.1400	162.2
Oct	1.6500	122.5	30.1000	137.1	.5200	170.8	.0413	[b]156.7	1.2450	177.1
Nov	1.6500	122.5	30.1000	137.1	.3800	124.8	.0413	[b]156.7	1.2100	172.1
Dec	1.6500	122.5	29.6000	134.8	.3850	126.5	.0338	[b]128.2	1.2100	172.1
Average, 1907	1.6000	118.8	28.7042	130.7	.4869	160.0	.0486	[b]184.4	1.0346	147.2

[a] Jute: raw, spot quotations.

[b] For method of computing relative price, see pages 327 and 328; average price for 1906, $0.0539.

TABLE II.—MONTHLY ACTUAL AND RELATIVE PRICES OF COMMODITIES IN 1907 AND BASE PRICES (AVERAGE FOR 1890-1899)—Concluded.

[Average for 1907 computed from quotations in Table I.]

Month.	Miscellaneous.									
	Paper, news.		Paper wrapping, manila.		Proof spirits.		Rope, manila, $\frac{7}{16}$-inch.		Rubber, Para Island.	
	Price per pound.	Relative price.	Price per pound.	Relative price.	Price per gallon.	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	$0.0299	100.0	$0.0553	100.0	$1.1499	100.0	[a]$0.0934	100.0	$0.8007	100.0
Jan	.0238	79.6	.0500	90.4	1.2900	112.2	.1275	136.5	1.1800	147.4
Feb	.0213	71.2	.0500	90.4	1.2900	112.2	.1325	141.9	1.1850	148.0
Mar	.0213	71.2	.0500	90.4	1.2900	112.2	.1325	141.9	1.1850	148.0
Apr	.0255	85.3	.0500	90.4	1.2900	112.2	.1325	141.9	1.1500	143.6
May	.0255	85.3	.0500	90.4	1.2925	112.4	.1325	141.9	1.1400	142.4
June	.0255	85.3	.0500	90.4	1.3100	113.9	.1325	141.9	1.0900	136.1
July	.0255	85.3	.0500	90.4	1.3100	113.9	.1325	141.9	1.0450	130.5
Aug	.0255	85.3	.0500	90.4	1.3100	113.9	.1325	141.9	1.0650	133.0
Sept	.0255	85.3	.0500	90.4	1.3300	115.7	.1263	135.2	1.0300	128.6
Oct	.0265	88.6	.0525	94.9	1.3450	117.0	.1263	135.2	.9950	124.3
Nov	.0265	88.6	.0525	94.9	1.3500	117.4	.1200	128.5	.9150	114.3
Dec	.0265	88.6	.0525	94.9	1.3500	117.4	.1175	125.8	.7800	97.4
Average, 1907	.0249	83.3	.0506	91.5	1.3133	114.2	.1290	138.1	1.0633	132.8

Month.	Soap, castile, mottled, pure.		Starch, laundry.		Tobacco, plug.		Tobacco, smoking, granulated, Seal of N. C.	
	Price per pound.	Relative price.	Price per pound	Relative price.	Price per pound.	Relative price.	Price per pound.	Relative price.
Average, 1890-1899	$0.0569	100.0	$0.0348	100.0	$0.3962	100.0	$0.5090	100.0
Jan	.0650	114.2	.0375	107.8	.4700	118.6	.6000	117.9
Feb	.0650	114.2	.0400	114.9	.4700	118.6	.6000	117.9
Mar	.0650	114.2	.0400	114.9	.4700	118.6	.6000	117.9
Apr	.0650	114.2	.0400	114.9	.4700	118.6	.6000	117.9
May	.0650	114.2	.0400	114.9	.4700	118.6	.6000	117.9
June	.0600	105.4	.0400	114.9	.4700	118.6	.6000	117.9
July	.0700	123.0	.0400	114.9	.4700	118.6	.6000	117.9
Aug	.0700	123.0	.0400	114.9	.4700	118.6	.6000	117.9
Sept	.0700	123.0	.0400	114.9	.4700	118.6	.6000	117.9
Oct	.0700	123.0	.0425	122.1	.4700	118.6	.6000	117.9
Nov	.0700	123.0	.0425	122.1	.4700	118.6	.6000	117.9
Dec	.0700	123.0	.0425	122.1	.4700	118.6	.6000	117.9
Average, 1907	.0671	117.9	.0404	116.1	.4700	118.6	.6000	117.9

[a] $\frac{3}{8}$-inch.

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907.

[For explanation and discussion of this table, see pages 328 to 337. Average price for 1890-1899=100.0. For a more detailed description of the articles, see Table I. Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	Farm products.										
	Cotton: upland, middling.	Flaxseed No. 1.	Grain.						Hay: timothy, No. 1.	Hides: green, salted, packers, heavy native steers.	Hops: New York State, choice.
			Barley by sample.	Corn. No. 2, cash.	Oats. cash	Rye: No. 2, cash.	Wheat: regular grades, cash.	Average.			
Jan.	139.9	103.3	119.7	108.4	129.6	116.9	97.1	114.3	148.6	173.6	124.2
Feb.	142.0	107.3	130.4	114.2	145.8	126.8	105.8	124.6	155.8	172.9	124.2
Mar.	143.8	108.2	153.2	116.0	152.0	127.4	105.0	130.7	153.4	163.4	124.2
Apr.	143.4	104.7	155.9	123.0	161.0	130.7	107.9	135.7	157.2	153.8	110.1
May.	154.9	105.6	171.8	139.4	171.8	150.3	127.7	152.2	169.0	153.4	87.5
June.	168.1	118.4	164.3	140.2	166.0	164.1	128.8	152.7	191.7	158.8	87.5
July.	169.5	112.5	145.9	142.2	162.1	161.5	128.5	148.0	176.4	157.1	87.5
Aug.	171.8	103.1	154.6	148.6	181.6	146.8	123.7	151.1	182.2	150.6	87.5
Sept.	163.5	106.4	201.3	162.0	198.0	166.7	134.5	172.5	163.6	150.6	81.9
Oct.	148.5	107.8	227.5	162.5	192.3	159.7	138.8	176.2	159.6	156.9	73.4
Nov.	142.0	101.5	191.2	153.9	174.1	148.0	124.4	158.3	146.8	145.6	96.0
Dec.	151.9	94.1	213.9	155.8	184.7	148.4	128.3	166.2	149.6	126.5	93.2
1907	153.0	106.1	169.0	138.8	167.4	145.4	120.8	148.3	162.4	155.3	98.1

Month	Live stock										Average, farm products.
	Cattle			Hogs			Sheep			Average.	
	Steers, choice to extra	Steers, good to choice.	Average	Heavy	Light	Average.	Native	Western.	Average.		
Jan.	124.8	120.4	122.6	149.4	148.8	149.1	133.2	125.3	129.3	133.7	129.0
Feb.	124.4	124.9	124.7	159.4	158.1	158.8	135.5	126.5	131.0	138.1	134.6
Mar.	121.3	121.0	121.2	150.6	151.7	151.2	142.0	133.1	137.6	136.6	135.4
Apr.	120.3	123.3	121.8	150.1	150.8	150.5	149.4	142.0	145.7	130.3	136.5
May.	115.9	119.4	117.7	143.4	146.0	144.7	145.0	137.5	141.3	134.5	139.9
June.	126.8	131.1	129.0	137.8	140.2	139.0	145.5	138.3	141.9	136.6	144.2
July.	131.9	133.6	132.8	133.4	140.3	136.9	136.1	129.4	132.8	134.1	140.5
Aug.	131.5	130.5	131.0	135.6	144.1	139.9	134.7	128.8	131.8	134.2	141.0
Sept.	126.9	124.5	125.7	135.8	144.9	140.4	137.2	130.4	133.8	133.3	145.5
Oct.	126.4	123.2	124.8	141.3	145.9	143.6	126.1	120.8	123.5	130.6	144.4
Nov.	117.7	114.1	115.9	113.5	114.5	114.0	91.5	86.9	89.2	106.4	128.9
Dec.	109.7	108.6	109.2	105.4	105.3	105.4	91.0	86.5	88.8	101.1	128.3
1907.	123.0	122.8	122.9	137.8	140.6	139.2	130.3	123.5	126.9	129.7	137.1

Month.	Food, etc.								
	Beans: medium, choice	Bread							
		Crackers.			Loaf.				Average.
		Boston	Soda	Average.	Washington market.	Home-made (N. Y market)	Vienna (N. Y market).	Average.	
Jan.	92.8	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Feb.	89.8	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Mar.	89.8	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Apr.	87.6	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
May.	86.8	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
June.	110.8	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
July.	101.8	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Aug.	98.8	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Sept.	108.5	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Oct.	137.7	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Nov.	135.5	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
Dec.	137.0	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4
1907.	106.4	133.7	90.5	112.1	100.6	118.6	113.6	110.9	111.4

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Realtive price for 1907 computed from average price for the year shown in Table I.]

Month	Food, etc.												
	Butter				Cheese, N. Y., full cream.	Coffee, Rio No. 7.	Eggs, new-laid, fancy, near-by.	Fish					
	Creamery, Elgin (Elgin market).	Creamery, extra (N. Y. market).	Dairy, New York State.	Average.				Cod, dry, bank, large.	Herring, shore, round.	Mackerel, salt, large No. 3s.	Salmon, canned.	Average.
Jan....	141.2	140.3	134.9	138.8	146.9	51.3	161.0	143.2	158.9	120.3	113.7	134.0
Feb....	150.9	148.3	147.6	148.9	148.8	52.9	149.7	143.2	158.9	116.8	113.7	133.2
Mar....	141.7	140.2	146.4	142.8	149.4	55.2	106.4	143.2	158.9	113.2	113.7	132.3
Apr....	138.2	137.4	143.8	139.8	152.0	53.3	98.3	143.2	158.9	84.9	113.7	125.2
May....	109.4	112.6	120.8	114.3	137.8	51.4	97.8	143.2	158.9	84.9	113.7	125.2
June....	106.6	108.2	115.2	110.0	120.4	49.5	95.2	143.2	158.9	88.5	112.0	125.7
July....	112.9	113.4	119.6	115.3	125.1	48.1	110.3	143.2	158.9	88.5	a112.0	125.7
Aug....	114.7	110.4	118.6	114.6	123.5	49.5	131.8	132.1	a158.9	88.5	112.0	122.9
Sept....	129.6	122.7	130.9	127.7	138.4	48.1	140.8	132.1	a158.9	92.0	a112.0	123.8
Oct....	133.1	127.6	137.8	132.8	159.6	49.0	170.1	132.1	172.1	99.1	a112.0	128.8
Nov....	121.0	121.0	130.0	124.0	152.0	45.7	218.4	132.1	172.1	102.6	a112.0	129.7
Dec....	130.4	128.7	135.4	131.5	158.6	41.8	204.8	132.1	172.1	102.6	a112.0	129.7
1907....	127.2	126.2	132.0	128.5	143.3	50.1	141.2	138.6	162.9	98.5	113.2	128.3

Month.	Flour.						Fruit.		
	Buckwheat.	Rye.	Wheat.			Average.	Apples.		
			Spring patents.	Winter straights.	Average.		Evaporated, choice.	Sun-dried.	Average.
Jan....	115.8	119.8	95.1	86.0	90.6	104.2	98.9	131.1	115.0
Feb....	112.0	118.3	98.9	87.0	93.0	104.1	99.6	126.2	112.9
Mar....	108.1	117.6	96.6	86.5	91.6	102.2	97.4	123.9	110.7
Apr....	110.7	116.1	97.0	86.7	91.9	102.6	82.6	116.5	99.6
May....	a110.7	119.1	112.1	103.4	107.8	111.3	85.6	116.5	101.1
June....	a110.7	152.2	117.8	111.2	114.5	123.0	85.6	116.5	101.1
July....	a110.7	153.0	119.5	111.6	115.6	123.7	94.5	a116.5	105.5
Aug....	a110.7	148.5	117.1	106.3	111.7	120.7	97.4	a116.5	107.0
Sept....	a110.7	145.5	123.5	110.2	116.9	122.5	106.3	a116.5	111.4
Oct....	154.4	156.0	129.9	119.5	124.7	140.0	115.1	a116.5	115.8
Nov....	164.7	156.8	126.7	118.3	122.5	141.6	113.7	a116.5	115.1
Dec....	160.9	162.0	127.1	117.3	122.2	141.8	118.1	135.9	127.0
1907....	132.4	138.7	113.5	103.7	108.6	122.1	99.5	123.9	111.7

Month.	Fruit.				Glucose. (b)	Lard, prime contract.	Meal, corn.		
	Currants, in barrels.	Prunes, California, in boxes.	Raisins, California, London layer.	Average.			Fine white.	Fine yellow.	Average.
Jan....	193.3	74.3	100.0	119.5	148.8	149.2	124.0	127.8	125.9
Feb....	201.6	72.7	93.3	118.7	148.8	153.7	124.0	127.8	125.9
Mar....	198.4	71.8	93.3	117.0	148.8	144.2	124.0	127.8	125.9
Apr....	194.9	68.6	103.3	113.2	148.8	138.2	124.0	127.8	125.9
May....	181.6	64.6	105.0	110.7	148.8	143.1	120.4	124.2	122.3
June....	183.5	74.3	105.0	113.0	161.1	138.2	126.4	130.3	128.4
July....	186.7	79.2	105.0	116.4	161.1	139.3	128.7	132.8	130.8
Aug....	183.5	80.7	120.0	119.6	161.1	140.5	124.0	127.8	125.9
Sept....	176.5	85.7	120.0	121.0	168.2	141.1	133.5	137.7	135.6
Oct....	183.5	84.0	120.0	123.8	167.8	142.4	151.4	156.1	153.8
Nov....	183.5	84.0	120.0	123.5	174.9	132.1	146.9	151.4	149.2
Dec....	181.6	80.0	116.6	126.4	174.9	127.7	126.4	130.3	128.4
1907....	187.5	76.6	108.4	119.2	159.4	140.7	129.5	133.5	131.5

a Nominal price; see explanation on page 329.

b Average for 1893-1899=100.0.

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	Food, etc.										
	Meat										
	Beef				Pork						
	Fresh, native sides.	Salt, extra mess	Salt, hams, western	Average	Bacon, short clear sides.	Bacon, short rib sides	Hams, smoked	Salt, mess, old to new.	Average	Mutton, dressed.	Average.
Jan..	105.7	110.7	131.0	116.8	145.3	144.2	133.4	154.7	144.4	114.1	130.3
Feb....	104.5	115.4	136.1	118.7	152.3	151.1	138.5	161.2	150.8	112.7	134.0
Mar.. .	103.8	121.6	138.2	121.2	147.7	144.8	136.6	156.3	146.4	120.2	133.7
Apr....	108.0	121.6	138.2	122.6	142.4	140.9	136.0	152.8	143.0	132.0	134.0
May....	111.2	121.6	138.2	123.7	144.9	143.9	139.4	154.7	145.7	137.7	136.5
June....	119.2	121.6	138.2	126.3	141.2	141.5	137.5	155.3	143.9	128.5	135.4
July....	123.2	121.6	138.2	127.7	139.1	139.3	137.0	156.9	143.1	107.4	132.8
Aug ..	124.9	121.6	145.1	130.5	139.9	140.1	137.2	155.8	143.3	111.1	134.5
Sept....	120.4	124.7	157.5	134.2	141.2	139.6	133.4	152.6	141.7	109.4	134.9
Oct.....	121.9	127.9	159.2	136.3	141.6	139.9	131.6	147.4	140.1	110.1	135.0
Nov....	121.3	127.9	160.3	136.5	137.9	135.4	124.2	137.8	133.8	109.4	131.8
Dec.....	112.8	132.5	145.9	130.4	125.9	123.6	108.5	130.0	122.0	104.1	122.9
1907....	114.7	122.5	144.0	127.1	141.3	140.1	132.4	151.0	141.2	116.0	132.8

Month	Milk fresh.	Molasses New Orleans, open kettle.	Rice domestic, choice.	Salt American.	Soda: bicarbonate of, American.	Spices.			Starch: pure corn.
						Nutmegs	Pepper, Singapore.	Average.	
Jan....	147.1	134.9	82.5	113.6	62.2	35.9	141.9	88.9	109.5
Feb....	137.3	134.9	82.5	113.6	62.2	34.1	141.9	88.0	109.5
Mar....	127.5	119.0	82.5	113.6	62.2	34.1	141.9	88.0	109.5
Apr....	127.5	119.0	82.5	120.7	62.2	35.0	141.9	88.5	109.5
May....	112.5	119.0	82.5	120.7	62.2	34.1	135.2	84.7	109.5
June...	98.0	134.9	93.6	120.7	62.2	34.1	131.9	83.0	109.5
July..	103.1	134.9	93.6	107.9	62.2	30.7	126.0	78.4	109.5
Aug...	121.2	134.9	109.3	101.9	62.2	31.8	131.0	81.4	109.5
Sept....	132.5	134.9	109.3	103.6	62.2	31.0	131.0	81.0	109.5
Oct....	156.9	134.9	109.3	105.8	62.2	29.8	128.6	79.2	109.5
Nov ...	156.9	134.9	107.0	113.0	62.2	29.2	122.7	76.0	109.5
Dec....	156.9	120.6	107.0	116.4	62.2	28.1	118.6	73.4	109.5
1907....	131.4	129.7	95.2	112.6	62.2	32.3	132.7	82.5	109.5

Month.	Sugar				Tallow.	Tea Formosa, fine.	Vegetables, fresh.			Vinegar: cider, Monarch.	Average, food, etc.
	89° fair refining.	96° centrifugal	Granulated.	Average.			Onions.	Potatoes, white, choice to fancy.	Average.		
Jan....	88.8	90.9	97.3	92.3	147.4	81.0	103.0	78.6	90.8	115.0	117.0
Feb....	85.6	88.1	96.0	89.9	153.3	81.0	132.4	85.7	109.1	115.0	118.2
Mar....	89.0	91.1	96.3	92.1	155.2	81.0	161.8	83.8	122.8	115.0	116.7
Apr....	94.5	95.9	97.6	96.0	144.6	81.0	66.2	86.9	76.6	115.0	113.9
May...	98.7	99.6	100.5	99.6	144.4	81.0	88.2	127.8	108.0	115.0	113.8
June...	96.8	97.9	102.6	99.1	146.7	81.0	117.7	103.7	110.7	115.0	115.2
July...	98.9	99.8	100.8	99.8	143.7	81.0	117.7	72.6	95.2	115.0	114.9
Aug....	99.7	101.2	98.4	99.8	145.7	81.0	91.9	[a]72.6	82.3	115.0	115.3
Sept...	101.3	101.9	98.4	100.5	143.7	81.0	66.2	[a]72.6	69.4	115.0	117.4
Oct....	100.6	101.3	98.4	100.1	137.9	81.0	95.6	113.2	104.4	115.0	123.5
Nov....	95.8	97.1	97.6	96.8	131.5	81.0	91.9	108.6	100.3	128.6	122.8
Dec....	96.9	98.1	96.3	97.1	126.0	81.0	103.0	104.2	103.6	121.8	120.8
1907....	95.7	97.0	98.4	97.0	142.8	81.0	103.0	98.4	100.7	116.7	117.8

[a] Nominal price; see explanation on page 329.

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	Cloths and clothing											
		Blankets.				Boots and shoes.						
	Bags: 2 bu., Amoskeag.	11-4, all wool	11-4, cotton warp, all wool filling	11-4, cotton warp, cotton and wool filling	Average.	Men's brogans, split	Men's split boots.	Men's vici calf shoes, Blucher bal., vici calf top, single sole	Men's vici kid shoes, Goodyear welt	Women's solid grain shoes.	Average.
Jan....	132.2	119.0	130.5	141.5	130.3	131.4	162.1	109.0	108.7	125.4	127.3
Feb....	132.2	119.0	130.5	141.5	130.3	131.4	162.1	109.0	108.7	125.4	127.3
Mar....	132.2	119.0	130.5	141.5	130.3	131.4	162.1	109.0	108.7	125.4	127.3
Apr....	139.4	119.0	130.5	141.5	130.3	131.4	162.1	109.0	108.7	125.4	127.3
May...	139.4	119.0	130.5	141.5	130.3	131.4	162.1	109.0	108.7	125.4	127.3
June...	139.4	119.0	130.5	141.5	130.3	131.4	162.1	109.0	108.7	122.3	126.7
July...	139.4	119.0	130.5	141.5	130.3	128.9	162.1	109.0	108.7	122.3	126.2
Aug....	139.4	119.0	130.5	141.5	130.3	128.9	159.0	109.0	108.7	122.3	125.6
Sept...	150.1	119.0	130.5	141.5	130.3	126.3	159.0	109.0	108.7	122.3	125.1
Oct....	139.4	119.0	130.5	141.5	130.3	126.3	159.0	109.0	108.7	122.3	125.1
Nov...	139.4	119.0	130.5	141.5	130.3	123.8	156.0	109.0	108.7	119.3	123.4
Dec...	139.4	119.0	130.5	141.5	130.3	121.3	152.9	109.0	108.7	119.3	122.2
1907....	138.5	119.0	130.5	141.5	130.3	128.7	160.0	109.0	108.7	123.1	125.9

Month.	Broadcloth, first quality, black, 54-inch, XXX wool.	Calico standard American prints, 64 x 64.	Carpets				Cotton flannels.		
			Brussels, 5-frame, Bigelow.	Ingrain, 2-ply, Lowell	Wilton, 5-frame, Bigelow.	Average	2¾ yards to the pound.	3½ yards to the pound	Average.
Jan....	116.6	105.1	124.7	121.2	123.7	123.2	132.9	134.8	133.9
Feb....	116.6	105.1	124.7	121.2	123.7	123.2	132.9	134.8	133.9
Mar..	116.6	114.6	124.7	121.2	123.7	123.2	132.9	134.8	133.9
Apr...	116.6	114.6	124.7	121.2	123.7	123.2	132.9	134.8	133.9
May....	116.6	114.6	124.7	121.2	123.7	123.2	141.6	139.1	140.4
June...	116.6	114.6	124.7	121.2	123.7	123.2	141.6	139.1	140.4
July....	116.6	124.2	124.7	121.2	123.7	123.2	145.2	143.5	144.4
Aug....	116.6	124.2	124.7	121.2	123.7	123.2	145.2	143.5	144.4
Sept....	116.6	133.7	124.7	121.2	123.7	123.2	145.2	143.5	144.4
Oct....	116.6	133.7	124.7	121.2	123.7	123.2	145.2	143.5	144.4
Nov....	116.6	133.7	124.7	121.2	123.7	123.2	141.6	139.1	140.4
Dec....	116.6	133.7	124.7	121.2	123.7	123.2	141.6	139.1	140.4
1907....	116.6	121.0	124.7	121.2	123.7	123.2	139.9	139.1	139.5

Month.	Cotton thread 6-cord, 200-yard spools, J & P. Coats.	Cotton yarns			Denims Amoskeag.	Drillings.			Flannels: white, 4-4, Ballard Vale No. 3.
		Carded, white, mule-spun, northern, cones, 10/1	Carded, white, mule-spun, northern, cones, 22/1	Average		Brown, Pepperell	30-inch, Stark A	Average	
Jan.....	120.1	136.8	127.0	131.9	122.1	144.2	139.0	142.1	122.4
Feb.....	120.1	136.8	129.5	133.2	122.1	144.2	147.4	145.8	122.4
Mar...	120.1	133.7	129.5	131.6	124.5	144.2	146.6	145.4	122.4
Apr....	120.1	136.8	127.0	131.9	124.5	144.2	145.9	145.1	122.4
May...	120.1	136.8	127.0	131.9	124.5	144.2	158.2	151.2	122.4
June...	145.4	143.0	134.6	138.8	134.1	144.2	151.1	147.7	122.4
July....	145.4	146.1	139.7	142.9	138.9	144.2	154.3	149.3	122.4
Aug....	145.4	146.1	139.7	142.9	141.3	144.2	142.4	143.3	122.4
Sept...	145.4	143.0	137.1	140.1	141.3	144.2	155.9	150.1	124.4
Oct.....	145.4	136.8	132.0	134.4	141.3	144.2	150.1	147.2	124.4
Nov....	145.4	124.4	121.9	123.2	136.5	144.2	151.8	148.0	124.4
Dec.....	145.4	124.4	121.9	123.2	136.5	144.2	157.8	151.0	124.4
1907....	134.8	137.1	130.6	133.9	132.3	144.2	150.1	147.2	123.1

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0 Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	Cloths and clothing.								
	Ginghams.			Horse-blankets 6 pounds each, all wool	Hosiery.				
	Amoskeag.	Lancaster.	Average		Men's cotton half hose, seamless, fast black, 20 to 22 oz.	Men's cotton half hose, seamless, 84 needles.	Women's combed Egyptian cotton hose, high spliced heel.(a)	Women's cotton hose, seamless, fast black, 26 to 28 oz.	Average.
Jan....	112.6	113.4	113.0	130.9	b 85.3	95.6	109.5	b 81.6	93.0
Feb...	112.6	117.8	115.2	130.9	b 85.3	95.6	109.5	b 81.6	93.0
Mar....	112.6	117.8	115.2	130.9	b 85.3	95.6	109.5	b 81.6	93.0
Apr....	112.6	117.8	115.2	130.9	88.5	95.6	109.5	84.2	94.5
May...	112.6	117.8	115.2	130.9	c 88.5	95.6	109.5	c 84.2	94.5
June...	112.6	117.8	115.2	130.9	c 88.5	95.6	109.5	c 84.2	94.5
July....	131.3	117.8	124.6	130.9	c 88.5	95.6	109.5	c 84.2	94.5
Aug...	140.7	117.8	129.3	130.9	c 88.5	95.6	109.5	c 84.2	94.5
Sept....	140.7	126.5	133.6	130.9	94.8	95.6	109.5	89.5	97.4
Oct....	131.3	126.5	128.9	130.9	d 94.8	95.6	109.5	d 89.5	97.4
Nov.	131.3	126.5	128.9	130.9	d 94.8	95.6	109.5	d 89.5	97.4
Dec....	131.3	126.5	128.9	130.9	d 94.8	95.6	109.5	d 89.5	97.4
1907....	123.5	120.4	122.0	130.9	e 94.8	95.6	109.5	e 89.5	97.4

Month	Leather.					Linen thread.		
	Harness, oak.	Sole, hemlock.	Sole, oak	Wax calf, 30 to 40 lbs to the dozen, B grade.	Average	Shoe, 10s, Barbour.	3-cord, 200-yard spools, Barbour.	Average.
Jan..	131.1	135.4	120.4	110.8	124.4	102.1	103.7	102.9
Feb	131.1	135.4	114.5	110.8	123.0	102.1	103.7	102.9
Mar..	131.1	135.4	111.5	118.4	124.1	102.1	103.7	102.9
Apr..	131.1	136.7	111.5	118.4	124.4	102.1	103.7	102.9
May....	131.1	136.7	111.5	118.4	124.4	102.1	109.1	105.6
June.	127.7	136.7	111.5	118.4	123.6	102.1	109.1	105.6
July....	127.7	136.7	108.5	118.4	122.8	102.1	109.1	105.6
Aug....	127.7	136.7	113.0	118.4	124.0	102.1	109.1	105.6
Sept..	127.7	136.7	113.0	118.4	124.0	102.1	109.1	105.6
Oct.	127.7	136.7	117.5	118.4	125.1	102.1	109.1	105.6
Nov..	127.7	136.7	116.0	118.4	124.7	102.1	109.1	105.6
Dec..	125.9	136.7	114.5	118.4	123.9	102.1	109.1	105.6
1907	129.0	136.4	113.6	117.1	124.0	102.1	107.3	104.7

Month.	Overcoatings.					Print cloths 28-inch, 64 x 64	Shawls: standard, all wool (low grade), 72 x 144 inch, 40 to 42 ounce.
	Chinchilla, B-rough, all wool.	Chinchilla, cotton warp, C C grade.	Covert cloth, light weight, staple.	Kersey, standard 27 to 28 oz (f)	Average.		
Jan....	119.4	100.3	96.9	154.3	117.7	140.9	107.0
Feb....	119.4	101.4	96.9	158.4	119.0	147.6	107.0
Mar..	119.4	101.4	96.9	158.4	119.0	158.6	107.0
Apr....	119.4	101.4	96.9	158.4	119.0	158.6	107.0
May....	119.4	102.4	96.9	158.4	119.3	161.3	107.0
June...	119.4	100.3	96.9	158.4	118.8	170.9	107.0
July...	119.4	103.4	96.9	158.4	119.5	177.3	107.0
Aug....	119.4	100.3	96.9	158.4	118.8	185.0	107.0
Sept...	119.4	100.3	96.9	158.4	118.8	185.0	107.0
Oct....	119.4	102.4	96.9	158.4	119.3	185.0	107.0
Nov...	119.4	98.3	96.9	158.4	118.3	177.9	107.0
Dec....	119.4	94.2	96.9	158.4	117.2	155.3	107.0
1907....	119.4	100.5	96.9	158.0	118.7	167.4	107.0

a Average for 1893-1899=100.0.
b September, 1906, price.
c April, 1907, price.
d September, 1907, price.
e September, 1907, price, which represents the bulk of sales during the year.
f Average for 1897-1899=100.0.

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I.]

Month	Cloths and clothing									
	Sheetings									
	Bleached.				Brown					Average.
	9-4, Atlantic	10-4, Pepperell	10-4, Wamsutta S. T.	Average	4-4, Atlantic A	4-4, Indian Head	4-4, Mass Mills, Flying Horse brand.	4-4, Pepperell R.	Average	
Jan.	121.6	138.0	98.3	119.3	135.8	131.8	122.7	127.0	129.3	125.0
Feb.	134.0	138.0	98.3	123.4	135.4	131.8	126.8	127.0	130.3	127.3
Mar.	126.8	148.6	98.3	124.6	136.7	131.8	126.8	131.6	131.7	128.7
Apr.	127.0	148.6	105.1	126.9	136.2	131.8	126.8	131.6	131.6	129.6
May	126.1	148.6	105.1	126.6	135.6	131.8	126.8	131.6	131.5	129.4
June	135.2	159.2	105.1	133.2	142.3	131.8	126.8	136.1	134.3	133.8
July	126.1	159.2	105.1	130.1	137.4	131.8	130.9	136.1	134.1	132.4
Aug.	123.4	159.2	105.1	129.2	139.6	135.8	130.9	140.7	136.8	133.5
Sept.	123.3	159.2	105.1	129.2	140.0	135.8	130.9	140.7	136.9	133.6
Oct.	144.7	159.2	105.1	136.3	141.0	135.8	126.8	140.7	136.1	136.2
Nov.	161.8	159.2	105.1	142.0	145.6	135.8	126.8	140.7	137.2	139.3
Dec.	161.2	159.2	105.1	141.8	141.8	135.8	122.7	140.7	135.3	138.1
1907	134.3	153.0	103.4	130.2	[b] 138.9	133.4	127.1	135.4	133.7	132.2

Month.	Shirtings bleached.						Silk raw		
	4-4, Fruit of the Loom.	4-4, Hope	4-4, Lonsdale.	4-4, Wamsutta O. XX.	4-4, Williamsville, A 1.	Average	Italian, classical	Japan, filatures.	Average
Jan.	130.5	131.9	127.2	113.4	119.9	124.6	125.6	127.3	126.5
Feb.	137.4	135.7	134.1	113.4	122.7	128.7	122.7	124.9	123.8
Mar.	137.4	135.7	134.1	113.4	131.3	130.4	126.2	129.7	128.0
Apr.	151.1	135.7	134.1	113.4	131.3	133.1	133.2	136.4	134.8
May	151.1	135.7	134.1	113.4	131.3	133.1	139.0	139.4	139.2
June	158.0	135.7	134.1	113.4	134.1	135.1	136.7	131.5	134.1
July	158.0	154.6	151.3	118.7	137.0	143.9	135.5	125.5	130.5
Aug.	158.0	154.6	151.3	118.7	137.0	143.9	131.4	118.3	124.9
Sept.	164.8	154.6	151.3	118.7	137.0	145.3	136.7	132.2	134.5
Oct.	164.8	154.6	151.3	118.7	137.0	145.3	136.7	121.3	129.0
Nov.	164.8	154.6	151.3	118.7	137.0	145.3	132.0	118.9	125.5
Dec.	164.8	139.5	137.6	118.7	137.0	139.5	118.1	105.6	111.9
1907	153.4	143.7	141.0	116.0	132.8	137.4	131.1	125.9	128.5

Month.	Suitings							Tickings, Amoskeag A. C. A.
	Clay worsted diagonal, 12-ounce, Washington Mills.[a]	Clay worsted diagonal, 16-ounce, Washington Mills.[a]	Indigo blue, all wool, 54-inch, 14-ounce, Middlesex.	Indigo blue, all wool, 16-ounce.	Serge, Washington Mills 6700.([b])	Trouserings, fancy worsted ([b])	Average.	
Jan.	142.1	140.8	129.3	126.2	140.5	118.1	132.8	117.8
Feb	142.1	140.8	129.3	126.2	140.5	118.1	132.8	120.2
Mar.	142.1	140.8	129.3	126.2	140.5	118.1	132.8	122.5
Apr.	142.1	140.8	129.3	126.2	140.5	123.7	133.8	122.5
May	142.1	138.6	129.3	126.2	140.5	123.7	133.4	127.2
June	142.1	138.6	129.3	126.2	134.5	123.7	132.4	127.2
July	142.1	138.6	129.3	126.2	134.5	123.7	132.4	132.0
Aug.	142.1	138.6	129.3	126.2	140.5	123.7	133.4	136.7
Sept.	142.1	138.6	129.3	126.2	140.5	123.7	133.4	136.7
Oct.	142.1	138.6	129.3	126.2	140.5	123.7	133.4	136.7
Nov.	142.1	138.6	129.3	126.2	140.5	123.7	133.4	136.7
Dec.	142.1	138.6	129.3	126.2	140.5	123.7	133.4	136.7
1907	142.1	139.3	129.3	126.2	139.5	122.3	133.1	129.4

[a] Average for 1895-1899=100.0.

[b] Average for 1892-1899=100.0.

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	Cloths and clothing									
	Underwear.			Women's dress goods.						
	Shirts and drawers, white, all wool, etc.	Shirts and drawers, white, merino, wool and cotton	Average	Cashmere, all wool, 10-11 twill, 38-inch, Atlantic J	Cashmere, cotton warp, 9-twill, 4-4, Atlantic F	Cashmere, cotton warp, 36-inch, Hamilton	Danish cloth, cotton warp and filling, 22-inch	Franklin sackings, 6-4.	Poplar cloth, cotton warp and filling, 36-inch.	Average.
Jan...	115.8	106.0	110.9	134.9	145.1	127.8	124.9	129.1	109.6	128.6
Feb...	115.8	106.0	110.9	134.9	145.1	127.8	124.9	129.1	109.6	128.6
Mar....	115.8	106.0	110.9	134.9	145.1	127.8	124.9	129.1	109.6	128.6
Apr...	115.8	106.0	110.9	134.9	145.1	127.8	124.9	129.1	109.6	128.6
May....	115.8	106.0	110.9	134.9	145.1	127.8	124.9	129.1	109.6	128.6
June..	115.8	106.0	110.9	134.9	148.3	127.8	124.9	129.1	109.6	129.1
July...	115.8	106.0	110.9	134.9	148.3	127.8	124.9	129.1	109.6	129.1
Aug....	115.8	106.0	110.9	134.9	148.3	127.8	124.9	129.1	109.6	129.1
Sept...	115.8	106.0	110.9	134.9	148.3	127.8	124.9	129.1	109.6	129.1
Oct....	115.8	106.0	110.9	134.9	148.3	127.8	124.9	119.9	109.6	127.6
Nov...	115.8	106.0	110.9	134.9	148.3	127.8	124.9	119.9	109.6	127.6
Dec....	115.8	106.0	110.9	134.9	148.3	127.8	124.9	119.9	115.4	128.5
1907....	115.8	106.0	110.9	134.9	147.0	127.8	124.9	126.8	110.1	128.6

Month	Wool			Worsted yarns.			Average, cloths and clothing.
	Ohio, fine fleece (X and XX grade), scoured.	Ohio, medium fleece (¼ and ⅜ grade), scoured.	Average	2-40s, Australian fine	2-40s, XXXX, white, in skeins.	Average.	
Jan.....	127.1	115.5	121.3	127.7	129.1	128.4	123.2
Feb.....	127.1	115.5	121.3	127.7	129.1	128.4	123.9
Mar .	127.1	112.5	119.8	127.7	129.1	128.4	124.6
Apr....	127.1	112.5	119.8	127.7	129.1	128.4	125.3
May....	127.1	112.5	119.8	127.7	129.1	128.4	125.9
June....	130.9	112.5	121.7	127.7	127.1	127.4	126.9
July.. .	130.9	112.5	121.7	127.7	127.1	127.4	128.0
Aug..	134.8	112.5	123.7	127.7	127.1	127.4	128.3
Sept....	134.8	112.5	123.7	127.7	127.1	127.4	129.2
Oct.....	130.9	112.5	121.7	127.7	129.1	128.4	128.8
Nov....	130.9	112.5	121.7	125.7	129.1	127.4	128.2
Dec.....	130.9	112.5	121.7	125.7	129.1	127.4	127.1
1907....	129.9	113.0	121.5	127.3	128.4	127.9	126.7

Month.	Fuel and lighting.										
	Candles: adamantine, 6s, 14-ounce.	Coal.									Average.
		Anthracite.					Bituminous.				
		Broken.	Chestnut.	Egg.	Stove.	Average	Georges Creek (at mine)	Georges Creek (f. o. b. New York Harbor).	Pittsburg (Youghiogheny).	Average.	
Jan....	94.4	124.9	137.7	137.8	130.4	132.7	168.8	116.7	124.4	136.6	134.4
Feb....	94.4	124.8	137.7	137.7	130.4	132.7	168.8	116.7	124.4	136.6	134.4
Mar....	94.4	124.8	137.7	137.7	130.5	132.7	168.8	116.7	124.4	136.6	134.4
Apr....	94.4	124.8	123.8	123.8	117.3	122.4	168.8	116.7	124.4	136.6	128.5
May.....	94.4	124.8	126.1	126.0	119.3	124.1	168.8	116.7	124.4	136.6	129.4
June....	94.4	124.9	129.3	129.2	122.4	126.5	168.8	116.7	124.4	136.6	130.8
July....	94.4	124.9	132.0	131.9	125.0	128.5	168.8	116.7	124.4	136.6	132.0
Aug....	94.4	124.8	134.7	134.8	127.6	130.5	168.8	116.7	124.4	136.6	133.1
Sept....	94.4	124.9	137.4	137.7	130.3	132.6	163.2	114.8	128.3	135.4	133.8
Oct.....	95.9	125.0	137.6	137.8	130.4	132.7	196.9	125.8	132.2	151.6	140.8
Nov....	95.9	124.9	137.4	137.7	130.4	132.6	196.9	125.8	140.0	154.2	141.9
Dec.....	95.9	124.9	137.5	137.7	130.4	132.6	168.8	116.7	140.0	141.8	136.6
1907....	94.8	124.9	134.1	134.2	127.1	130.1	173.0	118.0	128.1	139.7	134.2

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	Fuel and lighting.							
	Coke Connellsville, furnace.	Matches parlor, domestic.	Petroleum					Average, fuel and lighting.
			Crude	Refined.			Average.	
				For export.	150° fire test, w. w.	Average		
Jan..	209.0	85.4	173.6	115.6	146.1	130.9	145.1	135.8
Feb..	210.5	85.4	173.6	119.4	151.7	135.6	148.2	136.6
Mar.	191.4	85.4	179.1	119.4	151.7	135.6	150.1	135.5
Apr..	164.9	85.4	195.6	126.3	151.7	139.0	157.9	132.1
May	164.9	85.4	195.6	126.3	151.7	139.0	157.9	132.6
June	136.9	85.4	195.6	126.3	151.7	139.0	157.9	131.2
July...	147.2	85.4	195.6	130.2	151.7	141.0	159.2	132.9
Aug...	154.6	85.4	195.6	130.2	151.7	141.0	159.2	134.1
Sept...	163.4	85.4	195.6	130.2	151.7	141.0	159.2	135.2
Oct....	173.7	85.4	195.6	130.2	151.7	141.0	159.2	139.9
Nov...	161.9	85.4	195.6	134.8	151.7	143.3	160.7	139.9
Dec..	117.8	85.4	195.6	134.8	151.7	143.3	160.7	133.6
1907.	166.3	85.4	190.5	127.0	151.2	139.1	156.2	135.0

Month.	Metals and implements.												
	Bar iron			Barb wire galvanized	Builders' hardware				Copper				
	Best refined, from store (Philadelphia market).	Common to best refined (Pittsburg market)	Average.		Butts loose joint, cast, 3 x 3 in	Door-knobs steel, bronze plated	Locks common mortise	Average.	Ingot, Lake	Sheet, hot-rolled (base sizes)	Wire, bare	Average.
Jan....	126.8	137.3	132.1	102.9	126.6	265.2	214.8	212.2	193.5	174.8	174.2	180.8
Feb..	131.7	135.1	133.4	102.9	126.6	265.2	244.8	212.2	203.6	180.8	187.8	190.7
Mar..	131.7	135.1	133.4	102.9	126.6	265.2	244.8	212.2	206.6	192.9	187.8	195.8
Apr..	131.7	135.1	133.4	102.9	126.6	265.2	244.8	212.2	200.6	192.9	187.8	193.8
May	131.7	135.1	133.4	102.9	126.6	265.2	244.8	212.2	206.6	192.9	187.8	195.8
June...	131.7	133.6	132.7	104.1	126.6	265.2	244.8	212.2	199.6	192.9	187.8	193.4
July....	131.7	129.8	130.8	104.1	126.6	265.2	244.8	212.2	193.5	192.9	187.8	191.4
Aug...	131.7	129.8	130.8	104.1	126.6	265.2	244.8	212.2	162.1	168.8	167.3	166.1
Sept..	131.7	127.6	129.7	106.1	126.6	265.2	244.8	212.2	146.9	168.8	167.3	161.0
Oct...	125.6	127.6	126.6	106.1	126.6	265.2	244.8	212.2	122.6	120.6	111.0	118.1
Nov..	119.5	127.6	123.6	106.1	126.6	265.2	244.8	212.2	117.5	120.6	109.3	115.8
Dec....	119.5	120.0	119.8	106.1	126.6	265.2	244.8	212.2	113.5	120.6	112.7	115.6
1907..	128.7	131.3	130.0	104.3	126.6	265.2	244.8	212.2	172.2	168.3	164.1	168.2

Month.	Lead pig.	Lead pipe	Nails			Pig iron.				
			Cut, 8-penny, fence and common	Wire, 8-penny, fence and common	Average.	Bessemer	Foundry No. 1.	Foundry No. 2	Gray forge, southern, coke.	Average.
Jan...	165.4	149.4	117.6	97.1	107.4	169.5	185.8	196.1	209.7	190.3
Feb....	166.1	149.4	117.6	97.1	107.4	168.7	184.9	196.1	209.7	189.9
Mar...	167.5	149.4	117.6	97.1	107.4	166.6	181.5	190.4	203.8	185.6
Apr...	163.5	149.4	117.6	97.1	107.4	170.9	179.4	192.3	209.7	188.1
May...	160.1	149.4	117.6	97.1	107.4	174.5	179.7	194.2	198.4	186.7
June.	151.7	142.0	117.6	97.1	107.4	177.8	173.9	204.2	198.4	188.6
July...	137.8	142.0	117.6	97.1	107.4	172.7	159.5	198.4	198.4	182.3
Aug...	135.2	134.5	120.4	97.1	108.8	166.6	152.0	183.1	189.4	172.8
Sept...	136.5	134.5	123.1	99.5	111.3	165.8	143.1	175.4	173.6	164.5
Oct....	122.8	127.0	120.4	99.5	110.0	166.2	137.8	163.0	171.3	159.6
Nov...	120.7	127.0	116.3	99.5	107.9	147.7	131.3	154.4	160.1	148.4
Dec....	111.5	115.8	116.3	99.5	107.9	142.3	127.9	146.7	148.8	141.4
1907.	144.9	139.2	118.3	97.9	108.1	165.8	161.4	182.9	180.3	174.9

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I]

Month	Metals and implements.							
	Quicksilver.	Silver bar, fine.	Spelter western.	Steel billets.	Steel rails	Steel sheets: black, No. 27. (a)	Tin. pig.	Tin plates: domestic, Bessemer, coke, 14x20 in. (b)
Jan..	96.5	92.6	147.8	136.6	107.4	111.6	227.9	119.8
Feb. ..	96.5	92.7	157.7	137.0	107.4	111.6	231.5	119.8
Mar...	96.5	90.9	153.8	134.7	107.4	111.6	228.2	119.8
Apr.. .	94.8	88.2	152.2	140.5	107.4	111.6	217.9	119.8
May ..	94.8	89.0	146.7	140.8	107.4	111.6	234.5	119.8
June.	94.8	90.5	143.8	137.6	107.4	111.6	226.0	119.8
July . .	92.1	91.8	141.2	139.4	107.4	111.6	233.6	119.8
Aug ...	92.1	92.7	129.4	136.6	107.4	111.6	211.3	119.8
Sept ..	92.1	91.4	122.3	136.4	107.4	111.6	202.2	119.8
Oct....	96.5	84.3	119.5	131.0	107.4	111.6	189.0	119.8
Nov ...	109.1	79.3	121.7	130.1	107.4	111.6	166.7	119.8
Dec..	109.1	73.7	102.4	130.1	107.4	111.6	163.9	119.8
1907...	97.1	88.1	136.5	135.9	107.4	111.6	211.1	119.8

Month	Tools.								
							Saws.		
	Augers extra, ¾-inch.	Axes M C O, Yankee	Chisels extra, socket firmer, 1 inch.	Files 8-inch, mill bastard.	Hammers Maydole No. 1½.	Planes Bailey No. 5.	Crosscut, Disston	Hand, Disston No. 7.	Average.
Jan	223.9	144.9	237.6	118.4	129.0	115.7	100.0	101.3	100.7
Feb ...	223.9	144.9	237.6	118.4	129.0	115.7	100.0	101.3	100.7
Mar...	223.9	144.9	237.6	118.4	129.0	115.7	100.0	101.3	100.7
Apr....	223.9	144.9	237.6	117.3	129.0	115.7	100.0	101.3	100.7
May....	223.9	144.9	237.6	117.3	129.0	115.7	100.0	101.3	100.7
June....	223.9	144.9	237.6	117.3	129.0	115.7	100.0	101.3	100.7
July.. .	223.9	144.9	237.6	117.3	129.0	115.7	100.0	101.3	100.7
Aug. .	223.9	144.9	237.6	117.3	129.0	115.7	100.0	101.3	100.7
Sept....	223.9	144.9	237.6	116.1	129.0	115.7	100.0	101.3	100.7
Oct....	223.9	144.9	237.6	116.1	129.0	115.7	100.0	101.3	100.7
Nov....	223.9	144.9	237.6	114.9	129.0	115.7	100.0	101.3	100.7
Dec.....	223.9	144.9	198.0	114.9	129.0	115.7	100.0	101.3	100.7
1907....	223.9	144.9	234.3	117.0	129.0	115.7	100.0	101.3	100.7

Month	Tools.				Wood screws: 1-inch, No 10, flat head	Zinc sheet.	Average, metals and implements.
	Shovels Ames No. 2	Trowels M. C. O, brick, 10½-inch	Vises: solid box, 50-pound	Average			
Jan....	99.7	100.0	147.4	115.7	80.7	142.9	147.9
Feb....	99.7	100.0	147.4	115.7	80.7	145.5	149.1
Mar..	99.7	100.0	147.4	115.7	80.7	147.2	148.8
Apr....	99.7	100.0	147.4	115.7	80.7	148.9	148.6
May..	99.7	100.0	147.4	115.7	80.7	148.9	148.8
June...	99.7	100.0	147.4	115.7	80.7	148.9	148.1
July..	99.7	100.0	147.4	115.7	80.7	148.9	146.9
Aug...	99.7	100.0	147.4	115.7	80.7	144.6	142.7
Sept....	99.7	100.0	147.4	115.7	80.7	134.2	140.8
Oct....	99.7	100.0	147.4	115.7	80.7	129.9	135.4
Nov .	99.7	100.0	147.4	115.7	80.7	129.9	133.3
Dec....	99.7	100.0	147.4	115.7	80.7	121.3	129.8
1907....	99.7	100.0	147.4	115.7	80.7	140.9	143.4

[a] Average for the period, July, 1894, to December, 1899—100.0.
[b] Average for 1896-1899=100.0.

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	Lumber and building materials.							
	Brick: common domestic.	Carbonate of lead American, in oil.	Cement.			Doors: pine.	Lime: common.	Linseed oil: raw.
			Portland, domestic.[a]	Rosendale.	Average.			
Jan....	112.4	127.4	82.7	107.1	94.9	168.0	122.4	90.4
Feb....	114.6	118.9	82.7	107.1	94.9	168.0	122.4	90.4
Mar...	114.6	118.9	82.7	107.1	94.9	168.0	122.4	90.4
Apr..	94.4	123.2	82.7	107.1	94.9	168.0	122.4	90.4
May ..	105.6	123.2	82.7	107.1	94.9	168.0	107.4	90.4
June...	134.8	123.2	82.7	107.1	94.9	168.0	107.4	97.0
July...	116.9	123.2	82.7	107.1	94.9	168.0	107.4	99.2
Aug....	116.9	123.2	85.2	107.1	96.2	168.0	107.4	94.8
Sept...	110.1	123.2	85.2	107.1	96.2	168.0	107.4	94.8
Oct....	105.6	114.7	85.2	107.1	96.2	173.3	107.4	103.6
Nov...	103.4	114.7	77.6	107.1	92.4	173.3	107.4	108.0
Dec....	98.9	114.7	77.6	107.1	92.4	151.1	125.4	99.2
1907...	110.7	120.8	82.4	107.1	94.8	167.5	113.9	95.7

Month.	Lumber.									
	Hemlock.	Maple: hard.	Oak: white.			Pine.				
						White, boards.			Yellow.	Average.
			Plain.	Quartered.	Average.	No. 2 barn.	Uppers.	Average.		
Jan......	186.0	117.0	136.3	149.0	142.7	192.2	194.9	193.6	165.2	184.1
Feb....	186.0	117.0	141.6	149.0	145.3	192.2	194.9	193.6	165.2	184.1
Mar....	186.0	122.6	146.9	149.0	148.0	192.2	190.0	195.6	165.2	185.5
Apr....	186.0	122.6	146.9	149.0	148.0	192.2	190.0	195.6	165.2	185.5
May.....	186.0	122.6	164.3	149.0	156.7	197.4	201.1	199.3	165.2	187.9
June....	186.0	122.6	153.6	149.0	151.3	197.4	201.1	199.3	165.2	187.9
July	186.0	122.6	153.6	149.0	151.3	197.4	201.1	199.3	165.2	187.9
Aug.	186.0	122.6	149.6	149.0	149.3	197.4	201.1	199.3	165.2	187.9
Sept....	186.0	122.6	144.3	149.0	146.7	197.4	201.1	199.3	165.2	187.9
Oct......	186.0	122.6	144.3	149.0	146.7	197.4	203.1	200.3	165.2	188.6
Nov......	186.0	122.6	144.3	149.0	146.7	197.4	203.1	200.3	165.2	188.6
Dec......	186.0	122.6	144.3	149.0	146.7	197.4	203.1	200.3	165.2	188.6
1907......	186.0	121.7	147.5	149.0	148.3	195.7	200.2	198.0	165.2	187.0

Month.	Lumber.			Oxide of zinc.	Plate glass: polished glazing.			Putty.	Resin: good, strained.
	Poplar.	Spruce.	Average.		Area, 3 to 5 square feet.	Area, 5 to 10 square feet.	Average.		
Jan....	170.6	174.2	165.0	134.5	77.2	80.1	78.7	75.9	295.2
Feb.....	170.6	174.2	165.6	134.5	77.2	80.1	78.7	75.9	309.0
Mar....	184.9	174.2	168.9	134.5	77.2	80.1	78.7	75.9	307.3
Apr....	184.9	174.2	168.9	134.5	77.2	80.1	78.7	75.9	316.0
May....	196.1	174.2	172.9	134.5	77.2	80.1	78.7	75.9	333.4
June...	183.3	174.2	170.3	134.5	77.2	80.1	78.7	75.9	333.4
July....	183.3	174.2	170.3	134.5	77.2	80.1	78.7	75.9	307.3
Aug....	189.7	174.2	170.5	134.5	77.2	80.1	78.7	75.9	312.5
Sept...	189.7	174.2	169.9	134.5	77.2	80.1	78.7	75.9	302.1
Oct....	189.7	146.4	167.1	134.5	77.2	80.1	78.7	75.9	293.4
Nov....	189.7	146.4	167.1	134.5	77.2	80.1	78.7	75.9	291.7
Dec....	189.7	146.4	167.1	134.5	77.2	80.1	78.7	75.9	246.5
1907....	185.2	167.3	168.6	134.5	77.2	80.1	78.7	75.9	304.0

[a] Average for 1895-1899=100.0.

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Continued.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table 1.]

Month	Lumber and building materials								
	Shingles			Tar.	Turpentine spirits of.	Window glass. American, single			Average, lumber and building materials.
	Cypress	Red cedar.	Average			Firsts, 6 x 8 to 10 x 15 inch	Thirds, 6 x 8 to 10 x 15 inch.	Average.	
Jan....	136.5	177.6	157.1	195.1	212.4	133.9	126.2	130.1	145.9
Feb....	136.5	195.4	166.0	190.9	221.4	133.9	126.2	130.1	147.3
Mar...	154.2	195.4	171.8	190.9	225.8	133.9	126.2	130.1	149.1
Apr....	154.2	206.0	180.1	232.4	218.4	133.9	126.2	130.1	150.5
May ...	154.2	213.2	183.7	190.9	201.9	133.9	126.2	130.1	150.4
June....	154.2	184.7	169.5	199.2	191.4	133.9	126.2	130.1	149.8
July....	154.2	213.2	183.7	207.5	182.5	133.9	126.2	130.1	149.2
Aug....	154.2	220.3	187.3	207.5	176.5	126.4	119.2	122.8	149.0
Sept..	154.2	213.2	183.7	190.9	174.2	126.4	119.2	122.8	147.2
Oct.....	154.2	195.4	174.8	190.9	164.5	126.4	119.2	122.8	144.9
Nov....	145.3	142.1	143.7	190.9	161.5	126.4	119.2	122.8	142.2
Dec.....	145.3	142.1	143.7	132.8	146.6	126.4	119.2	122.8	137.2
1907....	149.8	191.5	170.7	193.3	189.8	130.8	123.2	127.0	146.9

Month.	Drugs and chemicals									
	Alcohol grain	Alcohol wood, refined, 95 per cent	Alum lump.	Brimstone crude, seconds.	Glycerin refined	Muriatic acid 20°	Opium natural, in cases.	Quinine American.	Sulphuric acid 66°.	Average, drugs and chemicals.
Jan....	110.0	41.9	104.8	108.7	84.0	129.8	150.4	77.2	112.4	102.1
Feb....	110.0	41.9	104.8	106.9	85.8	129.8	150.4	89.4	112.4	103.5
Mar....	110.0	41.9	104.8	106.9	92.9	129.8	146.2	85.4	112.4	103.4
Apr....	110.0	41.9	104.8	106.9	92.9	129.8	169.5	77.2	112.4	105.0
May .	110.0	41.9	104.8	106.9	94.7	129.8	169.5	73.2	112.4	104.8
June...	112.9	41.9	104.8	106.9	96.5	129.8	161.0	73.2	112.4	104.4
July ..	112.9	41.9	104.8	106.9	98.3	129.8	201.3	65.0	112.4	108.1
Aug ...	112.9	41.9	104.8	106.9	101.9	129.8	296.6	65.0	112.4	119.1
Sept ...	112.9	41.9	104.8	106.9	101.9	129.8	296.6	65.0	112.4	119.1
Oct	115.6	41.9	104.8	94.2	110.8	129.8	275.4	65.0	112.4	116.7
Nov ...	116.5	41.9	104.8	94.2	112.6	129.8	264.8	65.0	112.4	115.8
Dec....	117.4	40.9	104.8	94.2	114.4	129.8	233.0	65.0	112.4	112.4
1907....	112.6	41.8	104.8	103.9	98.9	129.8	209.6	72.2	112.4	109.6

Month.	House furnishing goods.								
	Earthenware				Furniture.				
	Plates, cream-colored	Plates, white granite.	Teacups and saucers, white granite.	Average.	Bedroom sets, ash.	Chairs, bedroom, maple.	Chairs, kitchen.	Tables, kitchen.	Average.
Jan . . .	106.6	102.4	98.8	102.6	137.4	161.4	143.8	124.7	141.8
Feb....	106.6	102.4	98.8	102.6	137.4	161.4	143.8	124.7	141.8
Mar....	106.6	102.4	98.8	102.6	137.4	161.4	143.8	124.7	141.8
Apr....	106.6	102.4	98.8	102.6	137.4	161.4	143.8	124.7	141.8
May ...	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
June ..	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
July ...	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
Aug....	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
Sept ...	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
Oct ...	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
Nov....	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
Dec ...	106.6	102.4	98.8	102.6	137.4	161.4	156.8	124.7	145.1
1907....	106.6	102.4	98.8	102.6	137.4	161.4	151.4	124.7	143.7

TABLE III.—MONTHLY RELATIVE PRICES OF COMMODITIES IN 1907—Concluded.

[Average price for 1890-1899=100.0. Relative price for 1907 computed from average price for the year shown in Table I.]

Month.	House furnishing goods.										
	Glassware.				Table cutlery			Wooden ware.			Average, house furnishing goods.
	Nappies, 4-inch	Pitchers, ½-gallon, common	Tumblers, ½-pint, common.	Average.	Carvers, stag handles.	Knives and forks, cocobolo handles	Average.	Pails, oak-grained.	Tubs, oak-grained	Average.	
Jan...	125.0	89.4	84.5	99.6	93.8	104.0	98.9	130.9	107.6	119.3	115.0
Feb....	125.0	89.4	84.5	99.6	93.8	104.0	98.9	130.9	107.6	119.3	115.0
Mar..	125.0	89.4	84.5	99.6	93.8	104.0	98.9	150.1	118.8	134.5	117.2
Apr....	125.0	89.4	84.5	99.6	93.8	108.9	101.4	150.1	118.8	134.5	117.5
May....	125.0	89.4	84.5	99.6	93.8	108.9	101.4	150.1	118.8	134.5	117.5
June...	125.0	89.4	84.5	99.6	93.8	108.9	101.4	150.1	118.8	134.5	118.5
July...	125.0	89.4	84.5	99.6	106.3	108.9	107.6	150.1	122.5	136.3	119.6
Aug...	125.0	89.4	84.5	99.6	106.3	108.9	107.6	161.7	122.5	142.1	120.5
Sept...	125.0	89.4	84.5	99.6	106.3	108.9	107.6	161.7	122.5	142.1	120.5
Oct....	125.0	89.4	84.5	99.6	106.3	108.9	107.6	161.7	122.5	142.1	120.5
Nov....	125.0	89.4	84.5	99.6	106.3	104.8	105.6	161.7	122.5	142.1	120.2
Dec....	125.0	89.4	84.5	99.6	106.3	104.8	105.6	161.7	122.5	142.1	120.2
1907....	125.0	89.4	84.5	99.6	100.0	107.0	103.5	151.7	118.8	135.3	118.5

Month	Miscellaneous							
	Cottonseed meal	Cottonseed oil summer yellow, prime.	Jute raw	Malt western made	Paper			Proof spirits.
					News	Wrapping, manila	Average	
Jan...	134.8	133.0	237.1	108.1	79.6	90.4	85.0	112.2
Feb	130.2	142.9	194.6	112.4	71.2	90.4	80.8	112.2
Mar.	129.1	159.3	218.2	135.2	71.2	90.4	80.8	112.2
Apr..	125.7	152.8	223.1	135.2	85.3	90.4	87.9	112.2
May...	121.1	160.2	213.6	150.8	85.3	90.4	87.9	112.4
June...	125.7	185.6	189.7	149.4	85.3	90.4	87.9	113.9
July..	131.4	190.5	189.7	145.8	85.3	90.4	87.9	113.9
Aug....	129.1	187.3	156.7	145.8	85.3	90.4	87.9	113.9
Sept...	132.5	185.6	151.8	162.2	85.3	90.4	87.9	115.7
Oct...	137.1	170.8	156.7	177.1	88.6	94.9	91.8	117.0
Nov...	137.1	124.8	156.7	172.1	88.6	94.9	91.8	117.4
Dec....	134.8	126.5	128.2	172.1	88.6	94.9	91.8	117.4
1907...	130.7	160.0	184.4	147.2	83.3	91.5	87.4	114.2

Month	Rope manila.	Rubber Para Island.	Soap: castile, mottled, pure	Starch: laundry.	Tobacco			Average, miscellaneous.
					Plug	Smoking, gran., Seal of N. C.	Average.	
Jan...	136.5	147.4	114.2	107.8	118.6	117.9	118.3	126.0
Feb....	141.9	148.0	114.2	114.9	118.6	117.9	118.3	123.8
Mar....	141.9	148.0	114.2	114.9	118.6	117.9	118.3	128.5
Apr....	141.9	143.6	114.2	114.9	118.6	117.9	118.3	128.9
May...	141.9	142.4	114.2	114.9	118.6	117.9	118.3	129.5
June...	141.9	136.1	105.4	114.9	118.6	117.9	118.3	128.8
July.	141.9	130.5	123.0	114.9	118.6	117.9	118.3	130.3
Aug...	141.9	133.0	123.0	114.9	118.6	117.9	118.3	127.5
Sept..	135.2	128.6	123.0	114.9	118.6	117.9	118.3	127.8
Oct ..	135.2	124.3	123.0	122.1	118.6	117.9	118.3	129.5
Nov...	128.5	114.3	123.0	122.1	118.6	117.9	118.3	124.3
Dec...	125.8	97.4	123.0	122.1	118.6	117.9	118.3	120.6
1907....	138.1	132.8	117.9	116.1	118.6	117.9	118.3	127.1

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899).

[For explanation and discussion of this table, see page 337. For a more detailed description of the articles, see Table I.]

Year.	Farm products.									
	Barley: by sample.		Cattle: steers, choice to extra		Cattle: steers, good to choice		Corn, No. 2, cash.		Cotton: upland, middling.	
	Average price per bushel.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per bushel.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899..	$0.4534	100.0	$5.3203	100.0	$4.7347	100.0	$0.3804	100.0	$0.07762	**100.0**
1890	.5062	111.6	4.8697	91.5	4.1375	87.4	.3950	103.8	.11089	**142.9**
1891	.6098	134.5	5.8851	110.6	5.0976	107.7	.5744	151.0	.08603	**110.8**
1892	.5085	112.2	5.0909	95.7	4.4995	95.0	.4500	118.3	.07686	**99.0**
1893	.4685	103.3	5.5211	103.8	4.8394	102.2	.3964	104.2	.08319	**107.2**
1894	.5134	113.2	5.1591	97.0	4.5245	95.6	.4326	113.7	.07002	**90.2**
1895	.4300	94.8	5.4849	103.1	4.9344	104.2	.3955	104.0	.07298	**94.0**
1896	.2977	65.7	4.5957	86.4	4.2712	90.2	.2580	67.8	.07918	**102.0**
1897	.3226	71.2	5.2255	98.2	4.7736	100.8	.2546	66.9	.07153	**92.2**
1898	.4348	95.9	5.3779	101.1	4.8846	103.2	.3144	82.6	.05972	**76.9**
1899	.4425	97.6	5.9928	112.6	5.3851	113.7	.3333	87.6	.06578	**84.7**
1900	.4815	106.2	5.7827	108.7	5.3938	113.9	.3811	100.2	.09609	**123.8**
1901	.5884	129.8	6.1217	115.1	5.5901	118.1	.4969	130.6	.08627	**111.1**
1902	.6321	139.4	7.4721	140.4	6.5572	138.5	.5968	156.9	.08932	**115.1**
1903	.5494	121.2	5.5678	104.7	5.0615	106.9	.4606	121.1	.11235	**144.7**
1904	.5300	116.9	5.9562	112.0	5.1923	109.7	.5046	132.6	.12100	**155.9**
1905	.4850	107.0	5.9678	112.2	5.2192	110.2	.5010	131.7	.09553	**123.1**
1906	.5116	112.8	6.1298	115.2	5.3572	113.1	.4632	121.8	.11025	**142.0**
1907	.7663	169.0	6.5442	123.0	5.8120	122.8	.5280	138.8	.11879	**153.0**

Year.	Flaxseed, No. 1		Hay, timothy, No. 1		Hides, green, salted, packers, heavy native steers		Hogs, heavy		Hogs, light.	
	Average price per bushel	Relative price.	Average price per ton.	Relative price.	Average price per pound	Relative price	Average price per 100 lbs	Relative price	Average price per 100 lbs.	Relative price.
Average, 1890-1899..	$1.1132	100.0	$10.4304	100.0	$0.0937	100.0	$4.4123	100.0	$4.4206	**100.0**
1890	1.3967	125.5	9.9952	95.8	.0933	99.6	3.9534	89.6	3.9260	**88.8**
1891	1.0805	97.1	12.2861	117.8	.0951	101.5	4.4229	100.2	4.3404	**98.2**
1892	1.0179	91.4	11.8375	113.5	.0870	92.8	5.1550	116.8	5.0675	**114.6**
1893	1.0875	97.7	11.2067	107.4	.0749	79.9	6.5486	148.4	6.5752	**148.7**
1894	1.3533	121.6	10.4183	99.9	.0641	68.4	4.9719	112.7	4.9327	**111.6**
1895	1.2449	111.8	11.3844	109.1	.1028	109.7	4.2781	97.0	4.2533	**96.2**
1896	.8119	72.9	10.3269	99.0	.0811	86.6	3.3579	76.1	3.5591	**80.5**
1897	.8696	78.1	8.4423	80.9	.0996	106.3	3.5906	81.4	3.7223	**84.2**
1898	1.1115	99.8	8.3317	79.9	.1151	122.8	3.8053	86.2	3.7587	**85.0**
1899	1.1578	104.0	10.0745	96.6	.1235	131.8	4.0394	91.5	4.0709	**92.1**
1900	1.6223	145.7	11.5673	110.9	.1194	127.4	5.0815	115.2	5.1135	**115.7**
1901	1.6227	145.8	12.8255	123.0	.1237	132.0	5.9580	135.0	5.9177	**133.9**
1902	1.5027	135.0	12.6154	120.9	.1338	142.8	6.9704	158.0	6.7353	**152.4**
1903	1.0471	94.1	12.4279	119.2	.1169	124.8	6.0572	137.3	6.0541	**137.0**
1904	1.1088	99.6	11.7308	112.5	.1166	124.4	5.1550	116.8	5.1481	**116.5**
1905	1.1979	107.6	11.2596	107.9	.1430	152.6	5.2913	119.9	5.3213	**120.4**
1906	1.1027	99.1	12.9615	124.3	.1543	164.7	6.2351	141.3	6.3274	**143.1**
1907	1.1808	106.1	16.9387	162.4	.1455	155.3	6.0800	137.8	6.2163	**140.6**

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Farm products.									
	Hops N. Y. State, choice.		Oats cash.		Rye, No 2, cash		Sheep native.		Sheep: western.	
	Average price per pound	Relative price.	Average price per bushel.	Relative price.	Average price per bushel.	Relative price	Average price per 100 lbs.	Relative price.	Average price per 100 lbs.	Relative price.
Average, 1890-1899..	$0.1771	100.0	$0.2688	100.0	$0.5288	100.0	$3.7580	100.0	$3.9541	100.0
1890....	.2621	148.0	.3106	115.6	.5147	103.0	4.5284	120.5	4.6644	118.0
1891....	.2640	149.1	.3873	144.1	.8334	157.6	4.5106	120.0	4.5719	115.6
1892....	.2505	141.4	.3042	113.2	.6754	127.7	4.7798	127.2	4.8695	123.2
1893....	.2271	128.2	.2827	105.2	.4899	92.6	3.8781	103.2	4.1255	104.3
1894....	.1515	85.5	.3110	115.7	.4660	88.1	2.6957	71.7	2.9808	75.4
1895....	.0940	53.1	.2373	88.3	.4825	91.2	2.9495	78.5	3.0943	78.3
1896....	.0877	49.5	.1801	67.0	.3517	66.5	2.9322	78.0	3.1411	79.4
1897....	.1160	65.5	.1825	67.9	.3962	74.9	3.4971	93.1	3.7692	95.3
1898....	.1621	91.5	.2470	91.9	.4958	93.8	3.9250	104.4	4.1625	105.3
1899....	.1563	88.3	.2452	91.2	.5521	104.4	3.8837	103.3	4.1615	105.2
1900....	.1483	83.7	.2271	84.5	.5177	97.9	4.1236	109.7	4.5207	114.3
1901....	.1719	97.1	.3179	118.3	.5328	100.8	3.3519	89.2	3.7442	94.7
1902....	.2375	134.1	.3960	147.3	.5418	102.5	3.7817	100.6	4.1784	105.7
1903....	.2825	159.5	.3541	131.7	.5156	97.5	3.7101	98.7	3.8769	98.0
1904....	.3475	196.2	.3649	135.8	.7056	133.4	4.1457	110.3	4.2608	107.8
1905....	.2673	150.9	.2990	111.2	.7113	134.5	5.0529	134.5	5.0798	128.5
1906....	.1629	92.0	.3282	122.1	.6107	115.5	4.9481	131.7	5.2793	133.5
1907....	.1738	98.1	.4501	167.4	.7688	145.4	4.8962	130.3	4.8835	123.5

Year.	Farm products		Food, etc							
	Wheat cash.		Beans medium, choice.		Bread crackers, butter		Bread crackers, soda		Bread loaf (Wash market).	
	Average price per bushel	Relative price.	Average price per bushel.	Relative price	Average price per pound	Relative price.	Average price per pound.	Relative price	Average price per pound [a]	Relative price.
Average, 1890-1899.	$0.7510	100.0	$1.6699	100.0	$0.0673	100.0	$0.0718	100.0	$0.0354	100.0
1890....	.8933	118.9	2.0292	121.5	.0700	104.0	.0800	111.4	.0356	100.6
1891....	.9618	128.1	2.2531	134.9	.0700	104.0	.0800	111.4	.0356	100.6
1892....	.7876	104.9	1.8698	112.0	.0688	102.2	.0763	106.3	.0356	100.6
1893....	.6770	90.1	1.9906	119.2	.0650	96.6	.0750	104.5	.0356	100.6
1894....	.5587	74.4	1.8469	110.6	.0650	96.6	.0725	101.0	.0356	100.6
1895....	.6000	79.9	1.7896	107.2	.0654	97.2	.0675	94.0	.0333	94.1
1896....	.6413	85.4	1.1740	70.3	.0650	96.6	.0658	91.6	.0363	102.5
1897....	.7949	105.8	1.0448	62.6	.0592	88.0	.0592	82.5	.0356	100.6
1898....	.8849	117.8	1.2479	74.7	.0733	108.9	.0758	105.6	.0356	100.6
1899....	.7109	94.7	1.4531	87.0	.0713	105.9	.0663	92.3	.0356	100.6
1900....	.7040	93.7	2.0969	125.6	.0750	111.4	.0675	94.0	.0356	100.6
1901....	.7187	95.7	2.1927	131.3	.0800	118.9	.0700	97.5	.0356	100.6
1902....	.7414	98.7	1.9198	115.0	.0800	118.9	.0700	97.5	.0356	100.6
1903....	.7895	105.1	2.2625	135.5	.0758	112.6	.0646	90.0	.0356	100.6
1904....	1.0390	138.3	2.0104	120.4	.0775	115.2	.0658	91.6	.0363	102.5
1905....	1.0104	134.5	2.1500	128.8	.0892	132.5	.0683	95.1	.0356	100.6
1906....	.7931	105.6	1.9000	113.8	.0900	133.7	.0650	90.5	.0356	100.6
1907....	.9073	120.8	1.7771	106.4	.0900	133.7	.0650	90.5	.0356	100.6

[a] Weight before baking.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Food, etc.									
	Bread: loaf, homemade (N. Y. market)		Bread, loaf, Vienna (N.Y market)		Butter: creamery, Elgin (Elgin market).		Butter: creamery, extra (N Y. market)		Butter: dairy, New York State.	
	Average price per pound.[a]	Relative price	Average price per pound[a]	Relative price	Average price per pound.	Relative price	Average price per pound.	Relative price	Average price per pound.	Relative price.
Average, 1890-1899	$0.0317	100.0	$0.0352	100.0	$0.2170	100.0	$0.2242	100.0	$0.2024	100.0
1890	.0320	100.9	.0356	101.1	.2238	103.1	.2276	101.5	.1954	96.5
1891	.0320	100.9	.0356	101.1	.2501	115.3	.2586	115.3	.2380	117.6
1892	.0320	100.9	.0356	101.1	.2528	116.5	.2612	116.5	.2350	116.1
1893	.0320	100.9	.0356	101.1	.2581	118.9	.2701	120.5	.2521	124.6
1894	.0320	100.9	.0356	101.1	.2194	101.1	.2288	102.1	.2091	103.3
1895	.0320	100.9	.0356	101.1	.2064	95.1	.2137	95.3	.1882	93.0
1896	.0287	90.5	.0319	90.6	.1793	82.6	.1841	82.1	.1665	82.3
1897	.0320	100.9	.0356	101.1	.1837	84.7	.1895	84.5	.1684	83.2
1898	.0320	100.9	.0356	101.1	.1886	86.9	.1954	87.2	.1749	86.4
1899	.0320	100.9	.0356	101.1	.2075	95.6	.2126	94.8	.1965	97.1
1900	.0320	100.9	.0356	101.1	.2178	100.4	.2245	100.1	.2115	104.5
1901	.0320	100.9	.0356	101.1	.2114	97.4	.2163	96.5	.2007	99.2
1902	.0320	100.9	.0356	101.1	.2413	111.2	.2480	110.6	.2318	114.5
1903	.0320	100.9	.0356	101.1	.2302	106.1	.2348	104.7	.2150	106.2
1904	.0350	110.4	.0370	105.1	.2178	100.4	.2189	97.6	.1970	97.3
1905	.0376	118.6	.0400	113.6	.2429	111.9	.2489	111.0	.2339	11[illegible].6
1906	.0376	118.6	.0400	113.6	.2459	113.3	.2489	111.0	.2325	114.9
1907	.0376	118.6	.0400	113.6	.2761	127.2	.2830	126.2	.2671	132.0

Year.	Cheese: N. Y., full cream.		Coffee: Rio No. 7.		Eggs: new-laid, fancy, near-by		Fish: cod, dry, bank, large.		Fish: herring, shore, round.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per dozen.	Relative price.	Average price per quintal	Relative price.	Average price per barrel.	Relative price.
Average, 1890-1899	$0.0987	100.0	$0.1313	100.0	$0.1963	100.0	$5.5849	100.0	$3.7763	100.0
1890	.0958	97.1	.1793	136.6	.1945	99.1	5.6771	101.7	3.5250	93.3
1891	.1011	102.4	.1671	127.3	.2160	110.0	6.7292	120.5	4.7068	124.6
1892	.1058	107.2	.1430	108.9	.2167	110.4	7.0521	126.3	2.9375	77.8
1893	.1076	109.0	.1723	131.2	.2247	114.5	6.3802	114.2	3.8125	101.0
1894	.1060	107.4	.1654	126.0	.1835	93.5	5.9583	106.7	3.3958	89.9
1895	.0929	94.1	.1592	121.2	.2002	102.0	5.5208	98.9	3.1563	83.6
1896	.0908	92.0	.1233	93.9	.1741	88.7	4.2083	75.4	3.3542	88.8
1897	.0968	98.1	.0793	60.4	.1718	87.5	4.5208	80.9	3.6354	96.3
1898	.0822	83.3	.0633	48.2	.1817	92.6	4.6667	83.6	4.2083	111.4
1899	.1075	108.9	.0604	46.0	.1994	101.6	5.1354	92.0	5.0313	133.2
1900	.1128	114.3	.0822	62.6	.1977	100.7	5.3021	94.9	5.0833	134.6
1901	.1011	102.4	.0646	49.2	.2095	106.7	5.9896	107.2	4.9792	131.9
1902	.1126	114.1	.0586	44.6	.2409	122.7	5.0938	91.2	4.9063	129.9
1903	.1217	123.3	.0559	42.6	.2418	123.2	5.8646	105.0	5.7292	151.7
1904	.1019	103.2	.0782	59.6	.2650	135.0	7.2813	130.4	5.4531	144.4
1905	.1212	122.8	.0832	63.4	.2712	138.2	7.3958	132.4	6.0000	158.9
1906	.1313	133.0	.0811	61.8	.2615	133.2	7.6042	136.2	6.3438	168.0
1907	.1414	143.3	.0658	50.1	.2771	141.2	7.7396	138.6	6.1500	162.9

[a] Weight before baking.

Table IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Food, etc.									
	Fish mackerel, salt, large No. 3s.		Fish: salmon, canned.		Flour buckwheat.		Flour: rye.		Flour: wheat, spring patents.	
	Average price per barrel.	Relative price.	Average price per 12 cans.	Relative price.	Average price per 100 lbs	Relative price.	Average price per barrel.	Relative price.	Average price per barrel.	Relative price.
Average, 1890-1899	$14.1306	100.0	$1.4731	100.0	$1.9428	100.0	$3.3171	100.0	$4.2972	100.0
1890	18.2500	129.2	1.6417	111.4	2.0214	104.0	3.3646	101.4	5.1856	120.7
1891	15.3125	108.4	1.5000	101.8	2.4429	125.7	4.9208	148.3	5.3053	123.5
1892	13.0000	92.0	1.4833	100.7	1.7891	92.1	4.0167	121.1	4.3466	101.1
1893	13.0000	92.0	1.4938	101.4	2.3679	121.9	3.0854	93.0	4.0063	93.2
1894	11.0556	78.2	1.4250	96.7	2.4357	125.4	2.7813	83.8	3.5947	83.7
1895	15.6250	110.6	1.5042	102.1	1.6750	86.2	3.1333	94.5	3.6434	84.8
1896	13.9167	98.5	1.5500	105.2	1.3806	71.1	2.6833	80.9	3.7957	88.3
1897	12.2292	86.5	1.3375	90.8	1.4656	75.4	2.8063	84.6	4.5913	106.8
1898	13.6667	96.7	1.2667	86.0	1.5500	79.8	3.0813	92.9	4.7293	110.1
1899	15.2500	107.9	1.5292	103.8	2.3000	118.1	3.2979	99.4	3.7740	87.8
1900	13.8958	98.3	1.7708	120.2	2.1036	108.3	3.4250	103.3	3.8423	89.4
1901	10.8182	76.6	1.7125	116.3	2.1063	108.4	3.3208	100.1	3.8104	88.7
1902	13.7500	97.3	1.6146	109.6	2.2357	115.1	3.4417	103.8	3.8082	88.6
1903	17.4479	123.5	1.6208	110.0	2.3214	119.5	3.1479	94.9	4.3303	100.8
1904	14.5000	102.6	1.7250	117.1	2.3333	120.1	4.3479	131.1	5.3784	125.2
1905	13.9167	98.5	1.7042	115.7	2.1893	112.7	4.4667	134.7	5.4221	126.2
1906	14.7917	104.7	1.6833	114.3	2.2333	115.0	3.8438	115.9	4.2760	99.5
1907	13.9167	98.5	1.6679	113.2	2.5714	132.4	4.6021	138.7	4.8755	113.5

Year.	Flour wheat, winter straights.		Fruit apples, evaporated, choice.		Fruit apples, sun-dried.		Fruit currants, in barrels.		Fruit prunes, California, in boxes.	
	Average price per barrel.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	$3.8450	100.0	$0.0847	100.0	$0.0515	100.0	$0.0375	100.0	$0.0774	100.0
1890	4.6524	121.0	.1136	134.1	.0690	134.0	.0478	127.5	.1068	138.0
1891	4.9048	127.6	.1100	129.9	.0825	160.2	.0426	113.6	.1000	129.2
1892	4.1216	107.2	.0688	81.2	.0423	82.1	.0297	79.2	.0995	128.6
1893	3.2832	85.4	.0927	109.4	.0508	98.6	.0270	72.0	.1039	134.2
1894	2.7495	71.5	.1092	128.9	.0631	122.5	.0173	46.1	.0735	95.0
1895	3.2311	84.0	.0678	80.0	.0481	93.4	.0254	67.7	.0666	86.0
1896	3.6197	94.1	.0533	62.9	.0312	60.6	.0327	87.2	.0581	75.1
1897	4.3606	113.4	.0555	65.5	.0267	51.8	.0479	127.7	.0546	70.5
1898	4.1452	107.8	.0890	105.1	.0398	77.3	.0580	154.7	.0544	70.3
1899	3.3822	88.0	.0869	102.6	.0610	118.4	.0470	125.3	.0565	73.0
1900	3.3490	87.1	.0615	72.6	.0443	86.0	.0720	192.0	.0522	67.4
1901	3.3085	86.0	.0709	83.7	.0410	79.6	.0831	221.6	.0525	67.8
1902	3.4885	90.7	.0921	108.7	.0507	98.4	.0494	131.7	.0551	71.2
1903	3.5923	93.4	.0611	72.1	.0432	83.9	.0476	126.9	.0481	62.1
1904	4.8264	125.5	.0603	71.2	.0333	64.7	.0488	130.1	.0461	59.6
1905	4.5428	118.1	.0699	82.5	.0348	67.6	.0490	130.7	.0459	59.3
1906	3.6149	94.0	.0978	115.5	.0532	103.3	.0614	163.7	.0646	83.5
1907	3.9877	103.7	.0843	99.5	.0638	123.9	.0703	187.5	.0593	76.6

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Food, etc.									
	Fruit: raisins, California, London layer.		Glucose.		Lard: prime contract.		Meal: corn, fine white.		Meal: corn, fine yellow.	
	Average price per box.	Relative price.	Average price per 100 lbs	Relative price.	Average price per pound.	Relative price	Average price per 100 lbs	Relative price.	Average price per 100 lbs.	Relative price.
Average, 1890-1899..	$1.5006	100.0	[a]$1.4182	100.0	$0.0654	100.0	$1.0486	100.0	$1.0169	100.0
1890..	2.3604	157.3	...	...	.0633	96.8	1.0613	101.2	1.0200	100.3
1891.	1.8021	120.1	...	...	.0660	100.9	1.4746	140.6	1.4579	143.4
1892.	1.4688	97.9	...	...	.0771	117.9	1.1921	113.7	1.1608	114.2
1893.	1.7000	113.3	1.7625	124.3	.1030	157.5	1.1013	105.0	1.0833	106.5
1894.	1.1542	76.9	1.5802	111.4	.0773	118.2	1.1188	106.7	1.0629	104.5
1895.	1.4292	95.2	1.5492	109.2	.0653	99.8	1.0721	102.2	1.0613	104.4
1896.	1.0188	67.9	1.1585	81.7	.0469	71.7	.8129	77.5	.7854	77.2
1897.	1.3979	93.2	1.2190	86.0	.0441	67.4	.8158	77.8	.7633	75.1
1898.	1.3917	92.7	1.3021	91.8	.0552	84.4	.8821	84.1	.8463	83.2
1899.	1.2833	85.5	1.3558	95.6	.0556	85.0	.9554	91.1	.9273	91.2
1900	1.5208	101.3	1.4875	104.9	.0690	105.5	1.0115	96.5	.9908	97.4
1901.	1.4417	96.1	1.6458	116.0	.0885	135.3	1.1979	114.2	1.1875	116.8
1902.	1.6854	112.3	2.1788	153.6	.1059	161.9	1.5354	146.4	1.5250	150.0
1903.	1.4458	96.3	1.8396	129.7	.0877	134.1	1.2967	123.7	1.2783	125.7
1904.	1.4729	98.2	1.7917	126.3	.0731	111.8	1.3396	127.8	1.3333	131.[illegible]
1905.	1.1875	79.1	1.7742	125.1	.0745	113.9	1.3250	126.4	1.3250	130.3
1906.	1.6000	106.6	2.0267	142.9	.0887	135.6	1.2667	120.8	1.2625	124.2
1907.	1.6271	108.4	2.2608	159.4	.0920	140.7	1.3575	129.5	1.3575	133.5

Year.	Meat: bacon, short clear sides.		Meat: bacon, short rib sides.		Meat: beef, fresh, native sides.		Meat: beef, salt, extra mess.		Meat: beef, salt hams, western.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per barrel.	Relative price.
Average, 1890-1899..	$0.0675	100.0	$0.0656	100.0	$0.0771	100.0	$8.0166	100.0	$18.0912	100.0
1890.	.0603	89.3	.0586	89.3	.0688	89.2	6.9596	86.8	14.5409	80.4
1891.	.0699	103.6	.0681	103.8	.0819	106.2	8.3654	104.4	15.5144	85.8
1892.	.0787	116.6	.0764	116.5	.0762	98.8	6.7966	84.8	14.5577	80.5
1893.	.1048	155.3	.1010	154.0	.0813	105.4	8.1938	102.2	17.8317	98.6
1894.	.0751	111.3	.0736	112.2	.0748	97.0	8.0933	101.0	18.3558	101.5
1895.	.0650	96.3	.0632	96.3	.0792	102.7	8.1274	101.4	17.3443	95.9
1896.	.0494	73.2	.0479	73.0	.0698	90.5	7.5096	93.7	15.9327	88.1
1897.	.0541	80.1	.0522	79.6	.0769	99.7	7.6755	95.7	22.6250	125.1
1898.	.0596	88.3	.0594	90.5	.0781	101.3	9.1563	114.2	21.4880	118.8
1899.	.0583	86.4	.0558	85.1	.0835	108.3	9.2885	115.9	22.7212	125.6
1900.	.0752	111.4	.0732	111.6	.0804	104.3	9.7538	121.7	20.6587	114.2
1901.	.0891	132.0	.0869	132.5	.0787	102.1	9.3204	116.3	20.3774	112.6
1902.	.1073	159.0	.1046	159.5	.0971	125.9	11.7885	147.1	21.3413	118.0
1903.	.0959	142.1	.0938	143.0	.0784	101.7	9.0673	113.1	21.2115	117.2
1904.	.0775	114.8	.0757	115.4	.0818	106.1	8.7689	109.4	22.3341	123.5
1905.	.0800	118.5	.0783	119.4	.0802	104.0	10.0240	125.0	21.9052	121.6
1906..	.0942	139.6	.0920	140.2	.0780	101.2	8.8462	110.3	21.5625	119.2
1907..	.0954	141.3	.0919	140.1	.0884	114.7	9.8173	122.5	26.0519	144.0

[a] Average for 1893-1899.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Food, etc.									
	Meat hams, smoked.		Meat mutton, dressed.		Meat pork, salt, mess.		Milk, fresh.		Molasses N. O., open kettle.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per quart.	Relative price.	Average price per gallon.	Relative price.
Average, 1890-1899..	$0.0981	100.0	$0.0754	100.0	$11.6332	100.0	$0.0255	100.0	$0.3151	100.0
1890	.0995	101.1	.0933	123.7	12.1502	104.4	.0263	103.1	.3542	112.4
1891	.0982	99.8	.0866	114.9	11.3029	97.2	.0267	104.7	.2788	88.5
1892	.1076	109.3	.0914	121.2	11.5252	99.1	.0268	105.1	.3188	101.2
1893	.1249	126.9	.0803	106.5	18.3389	157.6	.0279	109.4	.3346	106.2
1894	.1019	103.6	.0605	80.2	14.1262	121.4	.0263	103.1	.3092	98.1
1895	.0947	96.2	.0620	82.2	11.8255	101.7	.0253	99.2	.3083	97.8
1896	.0943	95.8	.0625	82.9	8.9399	76.8	.0234	91.8	.3246	103.0
1897	.0894	90.9	.0728	96.6	8.9087	76.6	.0235	92.2	.2617	83.1
1898	.0807	82.0	.0739	98.0	9.8678	84.8	.0239	93.7	.3083	97.8
1899	.0923	93.8	.0711	94.3	9.3462	80.3	.0253	99.2	.3525	111.9
1900	.1025	104.2	.0727	96.4	12.5072	107.5	.0274	107.5	.4775	151.5
1901	.1075	109.2	.0675	89.5	15.6108	134.2	.0262	102.7	.3783	120.1
1902	.1211	123.1	.0738	97.9	17.9399	154.2	.0288	112.9	.3638	115.5
1903	.1271	129.2	.0744	98.7	16.6514	143.1	.0288	112.9	.3546	112.5
1904	.1072	108.9	.0778	103.2	14.0288	120.6	.0275	107.8	.3396	107.8
1905	.1046	106.3	.0859	113.9	14.4183	123.9	.0289	113.3	.3229	102.5
1906	.1235	125.5	.0910	120.7	17.5120	150.5	.0301	118.0	.3400	107.9
1907	.1303	132.4	.0875	116.0	17.5684	151.0	.0335	131.4	.4088	129.7

Year.	Rice, domestic choice.		Salt, American.		Salt, Ashton's.		Soda, bicarbonate of, American.		Spices, nutmegs.	
	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per 224 lb. bag.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899..	$0.0561	100.0	$0.7044	100.0	$2.2043	100.0	$0.0209	100.0	$0.4322	100.0
1890	.0605	107.8	.7921	112.5	2.4646	111.9	.0275	131.6	.6317	146.2
1891	.0637	113.5	.7865	111.7	2.3813	108.1	.0317	151.7	.6081	140.7
1892	.0569	101.4	.7575	107.5	2.3750	107.8	.0218	104.3	.5319	123.1
1893	.0459	81.8	.7019	99.6	2.3250	105.5	.0285	136.4	.4584	106.1
1894	.0526	93.8	.7192	102.1	2.2375	101.6	.0268	128.2	.3996	92.5
1895	.0533	95.0	.7019	99.6	2.0500	93.0	.0177	84.7	.3969	91.8
1896	.0519	92.5	.6226	88.4	2.0500	93.0	.0152	72.7	.3590	83.1
1897	.0542	96.6	.6613	93.9	2.0500	93.0	.0150	71.8	.3354	77.6
1898	.0608	108.4	.6648	94.4	2.0500	93.0	.0129	61.7	.3140	72.7
1899	.0607	108.2	.6365	90.4	2.0500	93.0	.0117	56.0	.2871	66.4
1900	.0548	97.7	1.0010	142.1	2.0500	93.0	.0123	58.9	.2601	60.2
1901	.0548	97.7	.8567	121.6	2.1813	99.0	.0107	51.2	.2346	54.3
1902	.0559	99.6	.6360	90.3	2.2250	101.0	.0108	51.7	.2028	46.9
1903	.0566	100.9	.6140	87.2	2.2479	102.0	.0129	61.7	.2877	66.6
1904	.0441	78.6	.7704	109.4	(a)	....	.0130	62.2	.2175	50.3
1905	.0417	74.3	.7552	107.2	(a)	....	.0130	62.2	.1722	39.8
1906	.0474	84.5	.7144	101.4	(a)	....	.0130	62.2	.1730	40.0
1907	.0534	95.2	.7931	112.6	(a)	....	.0130	62.2	.1397	32.3

[a] Quotations discontinued.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Food, etc.									
	Spices: pepper, Singapore.		Starch pure corn.		Sugar: 89° fair refining.		Sugar: 96° centrifugal.		Sugar granulated.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	$0.0749	100.0	$0.0548	100.0	$0.03398	100.0	$0.03869	100.0	$0.04727	100.0
1890	.1151	153.7	.0546	99.6	.04890	143.9	.05460	141.1	.06168	130.5
1891	.0873	116.6	.0600	109.5	.03459	101.8	.03910	101.1	.04714	99.7
1892	.0689	92.0	.0600	109.5	.02873	84.5	.03315	85.7	.04354	92.1
1893	.0595	79.4	.0600	109.5	.03203	94.3	.03680	95.1	.04836	102.3
1894	.0516	68.9	.0567	103.5	.02759	81.2	.03229	83.5	.04111	87.0
1895	.0497	66.4	.0554	101.1	.02894	85.2	.03253	84.1	.04155	87.9
1896	.0500	66.8	.0513	93.6	.03192	93.9	.03624	93.7	.04532	95.9
1897	.0664	88.7	.0500	91.2	.03077	90.6	.03564	92.1	.04497	95.1
1898	.0891	119.0	.0500	91.2	.03712	109.2	.04235	109.5	.04974	105.2
1899	.1117	149.1	.0500	91.2	.03922	115.4	.04422	114.3	.04924	104.2
1900	.1291	172.4	.0500	91.2	.04051	119.2	.04572	118.2	.05332	112.8
1901	.1292	172.5	.0470	85.8	.03521	103.6	.04040	104.4	.05048	106.8
1902	.1255	167.6	.0440	80.3	.03035	89.3	.03542	91.5	.04455	94.2
1903	.1289	172.1	.0507	92.5	.03228	95.0	.03720	96.1	.04641	98.2
1904	.1229	164.1	.0525	95.8	.03470	102.1	.03974	102.7	.04772	101.0
1905	.1217	162.5	.0552	100.7	.03696	108.8	.04278	110.6	.05256	111.2
1906	.1138	151.9	.0577	105.3	.03183	93.7	.03686	95.3	.04515	95.5
1907	.0994	132.7	.0600	109.5	.03251	95.7	.03754	97.0	.04651	98.4

Year.	Tallow.		Tea: Formosa, fine.		Vegetables, fresh, onions.		Vegetables, fresh potatoes, Burbank.		Vinegar cider, Monarch	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per barrel.	Relative price.	Average price per bushel.	Relative price.	Average price per gallon.	Relative price.
Average, 1890-1899	$0.0435	100.0	$0.2839	100.0	$3.3995	100.0	$0.4991	100.0	$0.1478	100.0
1890	.0460	105.7	.2733	96.3	4.3438	127.8	.5956	119.3	.1558	105.4
1891	.0483	111.0	.2817	99.2	4.1250	121.3	.7730	154.9	.1800	121.8
1892	.0463	106.4	.3008	106.0	3.6042	106.0	.4546	91.1	.1642	111.1
1893	.0544	125.1	.2888	101.7	3.1875	93.8	.6714	134.5	.1500	101.5
1894	.0480	110.3	.2783	98.0	3.2500	95.6	.6128	122.8	.1500	101.5
1895	.0434	99.8	.2700	95.1	3.1146	91.6	.4326	86.7	.1450	98.1
1896	.0343	78.9	.2583	91.0	1.9479	57.3	.1965	39.4	.1300	88.0
1897	.0332	76.3	.2800	98.6	3.9271	115.5	.3279	65.7	.1300	88.0
1898	.0356	81.8	.2958	104.2	3.2708	96.2	.5094	102.1	.1325	89.6
1899	.0453	104.1	.3117	109.8	3.2238	94.8	.4172	83.6	.1400	94.7
1900	.0485	111.5	.2977	104.9	2.4271	71.4	.3736	74.9	.1350	91.3
1901	.0518	119.1	.2850	100.4	3.5000	103.0	.5642	113.0	.1325	89.6
1902	.0629	144.6	.3015	106.2	3.6458	107.2	.5958	119.4	.1408	95.3
1903	.0510	117.2	.2296	80.9	3.5675	104.9	.5249	105.2	.1300	88.0
1904	.0459	105.5	.2758	97.1	3.5568	104.6	.7301	146.3	.1325	89.6
1905	.0449	103.2	.2675	94.2	3.2392	95.3	.4026	80.7	.1458	98.6
1906	.0529	119.3	.2350	82.8	3.2917	96.8	.5476	109.7	.1700	115.0
1907	.0621	142.8	.2300	81.0	3.5000	103.0	.4912	98.4	.1725	116.7

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing.									
	Bags 2-bushel, Amoskeag.		Blankets: 11-4, 5 pounds to the pair, all wool.		Blankets 11-4, 5 pounds to the pair, cotton warp, all wool filling		Blankets 11-4, 5 pounds to the pair, cotton warp, cotton and wool filling		Boots and shoes men's brogans, split.	
	Average price per bag.	Relative price.	Average price per pound	Relative price	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pair.	Relative price.
Average, 1890-1899	$0.1399	100.0	$0.840	100.0	$0.613	100.0	$0.424	100.0	$0.9894	100.0
1890	.1594	113.9	.910	108.3	.650	106.0	.460	108.5	1.0500	106.1
1891	.1563	111.7	.890	106.0	.650	106.0	.460	108.5	1.0500	106.1
1892	.1550	110.8	.900	107.1	.640	104.4	.430	101.4	1.0375	104.9
1893	.1494	106.8	.900	107.1	.640	104.4	.420	99.1	1.0125	102.3
1894	.1275	91.1	.850	101.2	.550	89.7	.410	96.7	.9688	97.9
1895	.1150	82.2	.750	89.3	.540	88.1	.400	94.3	.9813	99.2
1896	.1281	91.6	.750	89.3	.560	91.4	.400	94.3	.9938	100.4
1897	.1300	92.9	.750	89.3	.650	106.0	.420	99.1	.9500	96.0
1898	.1338	95.6	.900	107.1	.625	102.0	.420	99.1	.9125	92.2
1899	.1446	103.4	.800	95.2	.625	102.0	.420	99.1	.9375	94.8
1900	.1575	112.6	.900	107.1	.750	122.3	.525	123.8	.9375	94.8
1901	.1413	101.0	.850	101.2	.650	106.0	.475	112.0	.9438	95.4
1902	.1433	102.4	.850	101.2	.650	106.0	.475	112.0	.9313	94.1
1903	.1458	104.2	.925	110.1	.700	114.2	.500	117.9	.9250	93.5
1904	.1796	128.4	.925	110.1	.725	118.3	.525	123.8	.9250	93.5
1905	.1533	109.6	1.000	119.0	.775	126.4	.600	141.5	1.0042	101.5
1906	.1806	129.1	1.025	122.0	.800	130.5	.600	141.5	1.2542	126.8
1907	.1938	138.5	1.000	119.0	.800	130.5	.600	141.5	1.2729	128.7

Year.	Boots and shoes men's calf bal shoes, Goodyear welt		Boots and shoes men's split boots		Boots and shoes men's vici kid shoes, Goodyear welt		Boots and shoes women's solid grain shoes.		Broadcloths: first quality, black, 54-inch, XXX wool.	
	Average price per pair.	Relative price.	Average price per 12 pairs.	Relative price.	Average price per pair.	Relative price.	Average price per pair.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899	$2.376	100.0	$16.350	100.0	$2.3000	100.0	$0.8175	100.0	$1.732	100.0
1890	2.400	101.0	17.000	104.0	2.5000	108.7	.8500	104.0	1.970	113.7
1891	2.400	101.0	17.000	104.0	2.5000	108.7	.8000	97.9	1.970	113.7
1892	2.400	101.0	17.000	104.0	2.5000	108.7	.7750	94.8	1.970	113.7
1893	2.400	101.0	16.500	100.9	2.5000	108.7	.7500	91.7	1.970	113.7
1894	2.400	101.0	16.000	97.9	2.5000	108.7	.7500	91.7	1.580	91.2
1895	2.400	101.0	15.000	91.7	2.2500	97.8	.8500	104.0	1.380	79.7
1896	2.400	101.0	15.500	94.8	2.2500	97.8	.8500	104.0	1.380	79.7
1897	2.400	101.0	16.000	97.9	2.0000	87.0	.8500	104.0	1.700	98.2
1898	2.320	97.6	16.500	100.9	2.0000	87.0	.8500	104.0	1.700	98.2
1899	2.240	94.3	17.000	104.0	2.0000	87.0	.8500	104.0	1.700	98.2
1900	2.240	94.3	18.000	110.1	2.0000	87.0	.9042	110.6	1.870	108.0
1901	2.300	96.8	18.375	112.4	2.0000	87.0	.8542	104.5	1.910	110.3
1902	2.300	96.8	18.167	111.1	2.0000	87.0	.8625	105.5	1.910	110.3
1903	2.350	98.9	18.500	113.1	2.0000	87.0	.8875	108.6	1.910	110.3
1904	2.350	98.9	18.583	113.7	2.0083	87.3	.9183	112.3	1.914	110.5
1905	2.375	100.0	19.708	120.5	2.1958	95.5	.9771	119.5	1.995	115.2
1906	[a] 2.775	[a] 108.0	23.667	144.8	2.3792	103.4	1.0313	126.2	2.020	116.6
1907	[a] 2.800	[a] 109.0	26.167	160.0	2.5000	108.9	1.0063	123.1	2.020	116.6

[a] Men's vici calf shoes, Blucher bal., vici calf top, single sole. For method of computing relative price, see pages 327 and 328. Average price, 1905, $2.57.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing.									
	Calico Cocheco prints.		Carpets: Brussels, 5-frame, Bigelow.		Carpets: ingrain, 2-ply, Lowell.		Carpets: Wilton, 5-frame, Bigelow.		Cotton flannels: 2¾ yards to the pound.	
	Average price per yard.	Relative price	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899	$0.0553	100.0	$1.0008	100.0	$0.4752	100.0	$1.8432	100.0	$0.0706	100.0
1890	.0650	117.5	1.0320	103.1	.5160	108.6	1.9200	104.2	.0875	123.9
1891	.0575	104.0	1.1280	112.7	.5520	116.2	2.0160	109.4	.0875	123.9
1892	.0650	117.5	1.0320	103.1	.5040	106.1	1.9200	104.2	.0838	118.7
1893	.0625	113.0	.9840	98.3	.5280	111.1	1.9200	104.2	.0725	102.7
1894	.0550	99.5	.9360	93.5	.4680	98.5	1.9200	104.2	.0675	95.6
1895	.0525	94.9	.9360	93.5	.4200	88.4	1.6800	91.1	.0650	92.1
1896	.0525	94.9	.9360	93.5	.4080	85.9	1.6800	91.1	.0650	92.1
1897	.0500	90.4	.9600	95.9	.4320	90.9	1.7280	93.8	.0575	81.4
1898	.0450	81.4	1.0320	103.1	.4680	98.5	1.8240	99.0	.0575	81.4
1899	.0483	87.3	1.0320	103.1	.4560	96.0	1.8240	99.0	.0619	87.7
1900	.0525	94.9	1.0320	103.1	.4920	103.5	1.8720	101.6	.0738	104.5
1901	.0500	90.4	1.0320	103.1	.4800	101.0	1.8720	101.6	.0640	90.7
1902	.0500	90.4	1.0360	103.5	.4840	101.9	1.8840	102.2	.0650	92.1
1903	.0504	91.1	1.0880	108.7	.5136	108.1	2.0080	108.9	.0735	104.1
1904	.0529	95.7	1.1040	110.3	.5184	109.1	2.0400	110.7	.0885	125.4
1905	.0517	93.5	1.1520	115.1	.5520	116.2	2.1360	115.9	.0854	121.0
1906	.0550	99.5	1.1800	117.9	.5520	116.2	2.1920	118.9	.0923	130.7
1907	a .0602	a121.0	1.2480	124.7	.5760	121.2	2.2800	123.7	.0988	139.9

Year.	Cotton flannels 3½ yards to the pound		Cotton thread 6-cord, 200-yard spools, J. & P. Coats		Cotton yarns carded, white, mule-spun, northern, cones, 10/1.		Cotton yarns carded, white, mule-spun, northern, cones, 22/1		Denims Amoskeag.	
	Average price per yard	Relative price.	Average price per spool (b)	Relative price	Average price per pound	Relative price	Average price per pound.	Relative price	Average price per yard.	Relative price.
Average, 1890-1899	$0.0575	100.0	$.031008	100.0	$0.1608	100.0	$0.1969	100.0	$0.1044	100.0
1890	.0688	119.7	.031514	101.6	c .1790	111.3	c .2208	112.1	.1175	112.5
1891	.0688	119.7	.031238	100.7	c .1794	111.6	c .2244	114.0	.1144	109.6
1892	.0650	113.0	.031238	100.7	c .1885	117.2	c .2300	116.8	.1144	109.6
1893	.0575	100.0	.031238	100.7	.1808	112.4	.2138	108.6	.1175	112.5
1894	.0550	95.7	.031238	100.7	.1523	94.7	.1796	91.2	.1100	105.4
1895	.0525	91.3	.031238	100.7	.1477	91.9	.1815	92.2	.0988	94.6
1896	.0550	95.7	.030871	99.6	.1483	92.2	.1844	93.7	.0988	94.6
1897	.0550	95.7	.030503	98.4	.1452	90.3	.1788	90.8	.0931	89.2
1898	.0463	80.5	.030503	98.4	.1456	90.5	.1792	91.0	.0897	85.9
1899	.0508	88.3	.030503	98.4	.1408	87.6	.1760	89.4	.0896	85.8
1900	.0567	98.6	.037240	120.1	.1850	115.0	.2283	115.9	.1073	102.8
1901	.0575	100.0	.037240	120.1	.1585	98.6	.1927	97.9	.1046	100.2
1902	.0575	100.0	.037240	120.1	.1538	95.6	.1819	92.4	.1050	100.6
1903	.0629	109.4	.037240	120.1	.1869	116.2	.2156	109.5	.1127	108.0
1904	.0723	125.7	.037240	120.1	.1981	123.2	.2279	115.7	.1217	116.6
1905	.0681	118.4	.037240	120.1	.1733	107.8	.2038	103.5	.1083	103.7
1906	.0723	125.7	.037240	120.1	.2004	124.6	.2304	117.0	.1233	118.1
1907	.0800	139.1	.041813	134.8	.2204	137.1	.2571	130.6	.1381	132.3

[a] Calico: American standard prints, 64 x 64. For method of computing relative price, see pages 327 and 328. Average price for 1906, $0.0495.

[b] Freight paid.

[c] Records destroyed. Price estimated by person who furnished data for later years.

Table IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing.									
	Drillings: brown, Pepperell		Drillings, 30-inch, Stark A.		Flannels, white, 4-4, Ballard Vale No. 3.		Ginghams: Amoskeag.		Ginghams: Lancaster.	
	Average price per yard.	Relative price	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price
Average, 1890-1899	$0.0572	100.0	$0.0521	100.0	$0.3768	100.0	$0.0533	100.0	$0.0573	100.0
1890	.0683	119.4	.0640	122.8	.4400	116.8	.0625	117.3	.0692	120.8
1891	.0652	114.0	.0600	115.2	.4400	116.8	.0650	122.0	.0700	122.2
1892	.0582	101.7	.0535	102.7	.4367	115.9	.0650	122.0	.0700	122.2
1893	.0590	103.1	.0563	108.1	.4125	109.5	.0631	118.4	.0638	111.3
1894	.0559	97.7	.0502	96.4	.3546	94.1	.0485	91.0	.0504	88.0
1895	.0529	92.5	.0489	93.9	.3080	81.7	.0466	87.4	.0496	86.6
1896	.0573	100.2	.0522	100.2	.3217	85.4	.0472	88.6	.0500	87.3
1897	.0525	91.8	.0463	88.9	.3113	82.6	.0438	82.2	.0494	86.2
1898	.0513	89.7	.0437	83.9	.3685	97.8	.0431	80.9	.0488	85.2
1899	.0510	89.2	.0457	87.7	.3750	99.5	.0477	89.5	.0515	89.9
1900	.0606	105.9	.0542	104.0	.4096	108.7	.0515	96.6	.0550	96.0
1901	.0585	102.3	.0532	102.1	.3800	100.8	.0490	91.9	.0531	92.7
1902	.0575	100.5	.0539	103.5	.3986	105.8	.0523	98.1	.0575	100.3
1903	.0619	108.2	.0581	111.5	.4306	114.3	.0550	103.2	.0575	100.3
1904	.0727	127.1	.0658	126.3	.4433	117.6	.0548	102.8	.0556	97.0
1905	.0721	126.0	.0633	121.5	.4461	118.1	.0515	96.6	.0517	90.2
1906	.0775	135.5	.0740	142.0	.4613	122.4	.0565	106.0	.0592	103.3
1907	.0825	144.2	.0782	150.1	.4638	123.1	.0658	123.5	.0690	120.4

Year.	Horse blankets 6 pounds each, all wool.		Hosiery men's cotton half hose 20 to 22 oz (a)		Hosiery: men's cotton half hose, 84 needles		Hosiery women's combed Egyptian cotton		Hosiery women's cotton hose, 26 to 28 oz	
	Average price per pound	Relative price	Average price per 12prs (b)	Relative price	Average price per 12 pairs	Relative price	Average price per 12 pairs	Relative price	Average price per 12prs (b)	Relative price.
Average, 1890-1899	$0.573	100.0	$0.9555	100.0	$0.7845	100.0	c $1.850	100.0	$0.9310	100.0
1890	.625	109.1	1.2740	133.3	d .9750	124.3	....	....	1.2250	131.6
1891	.600	104.7	1.1760	123.1	d .9750	124.3	......	.	1.1270	121.1
1892	.625	109.1	1.0780	112.8	d .9700	123.6	....	..	1.0780	115.8
1893	.600	104.7	1.0535	110.3	d .8750	111.5	1.900	102.7	1.0535	113.2
1894	.550	96.0	.9800	102.6	d .7250	92.4	1.900	102.7	.9800	105.3
1895	.530	92.5	.9065	94.9	d .7000	89.2	1.875	101.4	.8575	92.1
1896	.520	90.8	.8330	87.2	d .7000	89.2	1.875	101.4	.7840	84.2
1897	.570	99.5	.7840	82.1	d .6500	82.9	1.850	100.0	.7595	81.6
1898	.570	99.5	.7350	76.9	d .6500	82.9	1.800	97.3	.7105	76.3
1899	.540	94.2	.7350	76.9	d .6250	79.7	1.750	94.6	.7350	78.9
1900	.680	118.7	.7840	82.1	d .6500	82.9	1.900	102.7	.7595	81.6
1901	.630	109.9	.6860	71.8	d .7250	82.4	2.000	108.1	.6615	71.1
1902	.630	109.9	.7350	76.9	.6667	85.0	1.850	100.0	.7350	78.9
1903	.675	117.8	.7840	82.1	.7063	90.0	1.875	101.4	.8085	86.8
1904	.700	122.2	.6370	82.1	.7525	95.9	1.800	97.3	.7595	81.6
1905	.750	130.9	.6370	82.1	.7000	89.2	1.750	94.6	.7840	84.2
1906	.775	135.3	.6615	85.3	.7000	89.2	1.900	102.7	.7595	81.6
1907	.750	130.9	.7350	94.8	.7500	95.6	2.025	109.5	.8330	89.5

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[a] The price for 1890-1903 is for two-thread goods. Prices, 1904 to 1907, are for single-thread goods. For method of computing relative price, see pages 327 and 328. Price of single-thread goods, $0.6370 in September, 1903.

[b] September price.

[c] Average for 1893-1899.

[d] January price.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing									
	Leather: harness, oak, country middles.		Leather: sole, hemlock.		Leather: sole, oak.		Leather: wax calf, 30 to 40 lbs to the dozen.		Linen shoe thread: 10s, Barbour.	
	Average price per pound	Relative price.	Average price per pound	Relative price	Average price per pound.	Relative price.	Average price per sq foot	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899..	$0.2590	100.0	$0.1939	100.0	$0.3363	100.0	$0.6545	100.0	$0.8748	100.0
1890	.2571	99.3	.1921	99.1	.3771	112.1	.6000	91.7	.8910	101.9
1891	.2579	99.6	.1858	95.8	.3679	109.4	.6469	98.8	.8910	101.9
1892	.2367	91.4	.1727	89.1	.3421	101.7	.6929	105.9	.8910	101.9
1893	.2400	92.7	.1796	92.6	.3483	103.6	.6450	98.5	.8993	102.8
1894	.2275	87.8	.1715	88.4	.3279	97.5	.6042	92.3	.9182	105.0
1895	.2888	111.5	.2073	106.9	.3421	101.7	.7333	112.0	.8514	97.3
1896	.2554	98.6	.1881	97.0	.2925	87.0	.6433	98.3	.8514	97.3
1897	.2433	93.9	.2033	104.8	.3079	91.6	.6156	94.1	.8514	97.3
1898	.2825	109.1	.2129	109.8	.3213	95.5	.6760	103.3	.8514	97.3
1899	.3004	116.0	.2254	116.2	.3358	99.9	.6875	105.0	.8514	97.3
1900	.3025	116.8	.2490	128.4	.3608	107.3	.6563	100.3	.8877	101.5
1901	.2971	114.7	.2475	127.6	.3525	104.8	.6281	96.0	.8910	101.9
1902	[a] .3325	[a]114.7	.2367	122.1	.3800	113.0	.6604	100.9	.8910	101.9
1903	[a] .3313	[a]114.3	.2267	116.9	.3742	111.3	.6900	105.4	.8460	96.7
1904	[a] .3188	[a]110.0	.2258	116.5	.3450	102.6	.6875	105.0	.8499	97.2
1905	[a] .3333	[a]115.0	.2290	118.1	.3663	108.9	.6969	106.5	.8499	97.2
1906	[a] .3713	[a]128.1	.2538	130.9	.3796	112.9	.7167	109.5	.8930	102.1
1907	[a] .3738	[a]129.0	.2644	136.4	.3821	113.6	.7667	117.1	.8930	102.1

Year.	Linen thread 3-cord 200-yard spools, Barbour.		Overcoatings beaver, Moscow, all wool		Overcoatings chinchilla, all wool.		Overcoatings chinchilla, cotton warp.		Overcoatings: covert cloth, light weight.	
	Average price per 12 spools	Relative price	Average price per yard.	Relative price	Average price per yard	Relative price	Average price per yard.	Relative price	Average price per yard	Relative price.
Average, 1890-1899	$0.8522	100.0	$2.0817	100.0	$2.1419	100.0	$0.4883	100.0	$2.3286	100.0
1890	.8910	101.6	[b]2.4296	116.7	[b]2.4296	113.4	.5325	109.1	2.4616	105.7
1891	.7945	93.2	[b]2.4296	116.7	[b]2.4296	113.4	.5258	107.7	2.4616	105.7
1892	.8019	94.1	[b]2.4296	116.7	[b]2.4296	113.4	.5329	109.1	2.4616	105.7
1893	.8308	97.5	2.3250	111.7	2.3250	108.5	.5367	109.9	2.4616	105.7
1894	.8514	99.9	1.9879	95.5	1.9879	92.8	.4733	96.9	2.4254	104.2
1895	.8514	99.9	1.7670	84.9	1.8774	87.7	.4508	92.3	2.3259	99.9
1896	.8514	99.9	1.7670	84.9	1.8774	87.7	.4354	89.2	2.0363	87.4
1897	.8679	101.8	1.7670	84.9	1.8774	87.7	.4575	93.7	1.9458	83.6
1898	.8910	104.6	1.8600	89.4	2.0925	97.7	.4800	98.3	2.2625	97.2
1899	.8910	101.6	2.0538	98.7	2.0925	97.7	.4583	93.9	2.4435	104.9
1900	.8910	104.6	2.4994	120.1	2.4994	116.7	.4892	100.2	2.3621	101.4
1901	.8910	101.6	2.2088	106.1	2.0925	97.7	.4433	90.8	2.2625	97.2
1902	.8910	104.6	2.2088	106.1	2.0925	97.7	.4508	92.3	2.2625	97.2
1903	.8370	98.2	2.4413	117.3	2.2088	103.1	.4533	92.8	2.1899	94.0
1904	.8835	103.7	2.3250	111.7	2.2088	103.1	.4558	93.3	2.1899	94.0
1905	.8835	103.7	2.4413	117.3	2.3948	111.8	.4588	94.0	2.2568	96.9
1906	.8835	103.7	(c)	....	2.5226	117.8	.4963	101.6	2.2568	96.9
1907	.9145	107.3	(c)	....	2.5575	119.4	.4908	100.5	2.2568	96.9

[a] Leather: harness, oak, packers' hides, heavy, No. 1. For method of computing relative price, see pages 327 and 328. Average price, 1901, $0.3325.

[b] Records destroyed. Price estimated by person who furnished data for later years.

[c] Quotations discontinued.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing									
	Overcoatings kersey, standard, 27 to 28 oz		Print cloths 28-inch, 64x64		Shawls standard, all wool, 72x144 in., 42-oz.		Sheetings bleached, 10-4, Atlantic.		Sheetings: bleached, 10-4, Pepperell.	
	Average price per yard.	Relative price	Average price per yard.	Relative price.	Average price each	Relative price	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899	a$1.2472	100.0	$0.02838	100.0	$4.5787	100.0	$0.1836	100.0	$0.1884	100.0
1890			.03340	117.7	4.9000	107.0	.2241	122.1	.2190	116.2
1891			.02938	103.5	4.9000	107.0	.2138	116.4	.2008	106.6
1892			.03386	119.3	4.9000	107.0	.1996	108.7	.1900	100.8
1893			.03251	114.6	4.9000	107.0	.2052	111.8	.1946	103.3
1894			.02748	96.8	4.9000	107.0	.1741	94.8	.1742	92.5
1895			.02864	100.9	4.9000	107.0	.1722	93.8	.1785	94.7
1896			.02581	90.9	4.0800	89.1	.1700	92.6	.1792	95.1
1897	1.1833	94.9	.02485	87.6	4.0970	89.5	.1604	87.4	.1738	92.3
1898	1.3000	104.2	.02059	72.6	4.1300	90.2	.1527	83.2	.1721	91.3
1899	1.2583	100.9	.02732	96.3	4.0800	89.1	.1641	89.4	.2021	107.3
1900	1.5750	126.3	.03083	108.6	4.9000	107.0	.2043	111.3	.2292	121.7
1901	1.5000	120.3	.02819	99.3	4.9000	107.0	.1853	100.9	.2117	112.4
1902	1.5000	120.3	.03090	108.9	4.9000	107.0	.1917	104.4	.2100	111.5
1903	1.5750	126.3	.032156	113.3	4.9000	107.0	.2124	115.7	.2275	120.8
1904	1.6500	132.3	.03320	117.3	4.9000	107.0	.2355	128.3	.2425	128.7
1905	1.8313	146.8	.031214	110.0	b2.2400	b117.5	.2024	110.2	.2267	120.3
1906	2.0417	163.7	.036238	127.7	b2.4500	b128.5	c.2095	c121.5	.2475	131.4
1907	1.9708	158.0	.047512	167.4	b2.0400	b107.0	c.2315	c134.3	.2883	153.0

Year.	Sheetings bleached, 10-4, Wamsutta S.T		Sheetings brown, 4-4, Atlantic A.		Sheetings brown, 4-4 Indian Head		Sheetings brown, 4-4, Pepperell R.		Sheetings: brown, 4-4, Stark A. A.	
	Average price per yard	Relative price	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899	$0.2949	100.0	$0.0553	100.0	$0.0626	100.0	$0.0551	100.0	$0.0525	100.0
1890	.3126	106.0	.0669	121.0	.0725	115.8	.0640	116.2	.0660	125.7
1891	.3162	107.2	.0653	118.1	.0727	116.1	.0597	108.3	.0594	113.1
1892	.2944	99.8	.0590	106.7	.0648	103.5	.0569	103.3	.0545	103.8
1893	.3056	103.6	.0619	111.9	.0679	108.5	.0583	105.8	.0574	109.3
1894	.2756	93.5	.0549	99.3	.0598	95.5	.0531	96.4	.0521	99.2
1895	.2719	92.2	.0520	94.0	.0585	93.5	.0529	96.0	.0513	97.7
1896	.2925	99.2	.0535	96.7	.0622	99.4	.0558	101.3	.0511	97.3
1897	.2925	99.2	.0490	88.6	.0588	93.9	.0525	95.3	.0452	86.1
1898	.2925	99.2	.0443	80.1	.0540	86.3	.0475	86.2	.0424	80.8
1899	.2951	100.1	.0466	84.3	.0544	86.9	.0504	91.5	.0451	85.9
1900	.3075	104.3	.0555	100.4	.0623	99.5	.0592	107.4	.0508	96.8
1901	.2925	99.2	.0542	98.0	.0631	100.8	.0592	107.4	.0494	94.1
1902	.2925	99.2	.0549	99.3	.0625	99.8	.0569	103.3	d.0566	d92.6
1903	.3038	103.0	.0636	115.0	.0681	108.8	.0599	108.7	d.0623	d101.9
1904	.2775	94.1	.0718	129.8	.0802	128.1	.0669	121.4	d.0715	d117.0
1905	.2700	91.6	.0639	115.6	.0758	121.1	.0644	116.9	d.0725	d118.6
1906	.2733	92.7	.0739	133.6	.0802	128.1	.0685	124.3	d.0767	d125.5
1907	.3050	103.4	.0768	138.9	.0835	133.4	.0746	135.4	d.0777	d127.1

[a] Average for 1897-1899.

[b] Shawls, standard, all wool (low grade), 72x144 inch, 40 to 42 ounce. For method of computing relative price, see pages 327 and 328. Average price, 1904, $2.04.

[c] Sheetings: bleached, 9-4, Atlantic. For method of computing relative price, see pages 327 and 328. Average price, 1905, $0.1901.

[d] Sheetings: brown, 4-4, Massachusetts Mills, Flying Horse brand. For method of computing relative price, see pages 327 and 328. Average price, 1901, $0.0575.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing.									
	Shirtings bleached, 4-4, Fruit of the Loom.		Shirtings, bleached, 4-4, Hope.		Shirtings bleached, 4-4, Lonsdale		Shirtings bleached, 4-4, New York Mills		Shirtings, bleached, 4-4, Wamsutta, O XX.	
	Average price per yard	Relative price	Average price per yard	Relative price	Average price per yard	Relative price	Average price per yard	Relative price.	Average price per yard.	Relative price.
Average, 1890-1899..	$0.0728	100.0	$0.0630	100.0	$0.0727	100.0	$0.0876	100.0	$0.0948	100.0
1890	.0845	116.1	.0726	115.2	.0845	116.2	.0968	110.5	.1011	106.6
1891	.0799	109.8	.0703	111.6	.0822	113.1	.0965	110.2	.1009	106.4
1892	.0808	111.0	.0663	105.2	.0812	111.7	.0931	106.3	.0973	102.6
1893	.0832	114.3	.0713	113.2	.0832	114.4	.0925	105.6	.0981	103.5
1894	.0727	99.9	.0620	98.4	.0727	100.0	.0885	101.0	.0950	100.2
1895	.0700	96.2	.0608	96.5	.0697	95.9	.0851	97.1	.0969	102.2
1896	.0696	95.6	.0620	98.4	.0685	94.2	.0885	101.0	.0951	100.3
1897	.0641	88.0	.0574	91.1	.0633	87.1	.0836	95.4	.0935	98.6
1898	.0584	80.2	.0518	82.2	.0595	81.8	.0784	89.5	.0807	85.1
1899	.0644	88.5	.0551	87.5	.0626	86.1	.0725	82.8	.0892	94.1
1900	.0753	103.4	.0671	106.5	.0731	100.6	.0786	89.7	.0965	101.8
1901	.0750	103.0	.0699	111.0	.0738	101.5	.0760	86.8	.0875	92.3
1902	.0756	103.8	.0676	107.3	.0741	101.9	.0766	87.4	.0885	93.4
1903	.0767	105.4	.0675	107.1	.0755	103.9	.0850	97.0	.0974	102.7
1904	.0802	110.2	.0705	111.9	.0796	109.5	.0830	94.7	.0921	97.2
1905	.0748	102.7	.0663	105.2	.0739	101.7	.0848	96.8	.0942	99.4
1906	.0817	112.2	.0728	115.6	.0806	110.9	[a].0946	[a]108.0	.1033	109.0
1907	.1117	153.4	.0905	143.7	.1025	141.0	[a].1163	[a]132.8	.1100	116.0

Year.	Silk raw, Italian, classical.		Silk raw, Japan, filatures		Suitings clay worsted, diagonal, 12-oz		Suitings clay worsted diagonal, 16-oz		Suitings indigo blue, all wool, 14-oz., Middlesex.	
	Average price per pound	Relative price	Average price per pound.	Relative price.	Average price per yard.	Relative price	Average price per yard.	Relative price	Average price per yard.	Relative price.
Average, 1890-1899	$4.2558	100.0	$1.0187	100.0	[b]$0.8236	100.0	[b]$1.0068	100.0	$1.3230	100.0
1890	5.2238	122.7	5.2429	130.5	.....	.....	.....	.....	1.5470	116.9
1891	4.1865	98.4	4.0110	99.8	.....	.....	.....	.....	1.5470	116.9
1892	4.4826	105.3	4.3266	107.7	.....	.....	.....	.....	1.5470	116.9
1893	5.0289	118.2	4.5409	113.0	.....	.....	.....	.....	1.5084	114.0
1894	3.6816	86.5	3.3627	83.7	.....	.....	.....	.....	1.4697	111.1
1895	4.0373	94.9	3.7855	94.2	.7621	92.5	.9445	93.8	1.1523	87.1
1896	3.6293	85.3	3.4072	84.8	.7337	89.1	.8819	87.6	1.1375	86.0
1897	3.6404	85.5	3.4637	86.2	.7595	92.2	.9392	93.3	1.0465	79.1
1898	3.8768	91.1	3.6376	90.5	.9165	111.3	1.1216	111.4	1.1375	86.0
1899	4.7706	112.1	4.4085	109.7	.9461	114.9	1.1468	113.9	1.1375	86.0
1900	4.5128	106.0	4.1690	103.7	1.0819	131.4	1.3463	133.7	1.1375	86.0
1901	3.8466	90.4	3.5132	87.4	.9113	110.6	1.1175	111.0	1.1849	89.6
1902	4.1085	96.5	3.8224	95.1	.9131	110.9	1.0931	108.6	1.3119	99.2
1903	4.5241	106.3	4.1346	102.9	.9488	115.2	1.1288	112.1	1.4400	108.8
1904	3.8651	90.8	3.6416	90.6	.9244	112.2	1.1036	109.6	1.4438	109.1
1905	4.1085	96.5	3.9912	99.3	1.0931	132.7	1.3013	129.3	1.5300	115.6
1906	4.3249	101.6	4.1632	103.6	1.2150	147.5	1.4738	146.4	1.7100	129.3
1907	5.5812	131.1	5.0602	125.9	1.1700	142.1	1.4025	139.3	1.7100	129.3

[a] Williamsville, A1.

[b] Average for 1895-1899.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing									
	Suitings: indigo blue, all wool, 16-oz		Suitings serge, Washington Mills 6700.		Tickings Amoskeag A. C. A.		Trouserings fancy worsted, 22 to 23 oz.		Underwear: white, all wool, etc.	
	Average price per yard.	Relative price	Average price per yard.	Relative price	Average price per yard.	Relative price	Average price per yard.	Relative price.	Average price, 12 garments.	Relative price.
Average, 1890-1899.	$1.9154	100.0	[a]$0.7526	100.0	$0.1061	100.0	[a]$1.9456	100.0	$23.31	100.0
1890.	[b]2.0925	109.2	....	....	.1200	113.1	....	....	24.75	106.2
1891.	[b]2.0925	109.2	....	....	.1175	110.7	....	....	25.65	110.0
1892	[b]2.0925	109.2	.9100	120.9	.1150	108.4	2.0734	106.6	25.65	110.0
1893	2.0925	109.2	.9100	120.9	.1181	111.3	2.0734	106.6	25.65	110.0
1894.	1.7670	92.3	.6825	90.7	.1084	102.2	1.9238	98.9	21.60	92.7
1895	1.5903	83.0	.6825	90.7	.1006	94.8	1.7100	87.9	21.60	92.7
1896	1.7228	89.9	.6143	81.6	.1019	96.0	1.7955	92.3	21.60	92.7
1897.	1.6740	87.4	.6598	87.7	.0975	91.9	1.7955	92.3	21.60	92.7
1898.	1.9763	103.2	.7508	99.8	.0894	84.3	2.1197	108.9	21.60	92.7
1899.	2.0538	107.2	.8106	107.7	.0923	87.0	2.0734	106.6	23.40	100.4
1900	2.2669	118.4	.8100	107.6	.1084	102.2	2.2871	117.6	23.40	100.4
1901.	2.0925	109.2	.8025	106.6	.1013	95.5	1.9879	102.2	23.40	100.4
1902.	2.0925	109.2	.7913	105.1	.1050	99.0	1.9800	101.8	23.40	100.4
1903.	2.1576	112.6	.7556	100.4	.1104	104.1	[c]2.0925	[c]104.6	23.40	100.4
1904.	2.1855	114.1	.7744	102.9	.1213	114.3	[c]2.1244	[c]106.2	23.40	100.4
1905.	2.2785	119.0	.9638	128.1	.1083	102.1	[c]2.2331	[c]111.6	23.40	100.4
1906	2.4180	126.2	1.0444	138.8	.1263	119.0	[c]2.4131	[c]120.6	27.00	115.8
1907.	2.4180	126.2	1.0500	139.5	.1373	129.4	[c]2.4469	[c]122.3	27.00	115.8

Year.	Underwear: white, merino, 52% wool, etc.		Women's dress goods alpaca, cotton warp, 22-inch, Hamilton.		Women's dress goods cashmere, all wool, Atlantic J.		Women's dress goods cashmere, cotton warp, Atlantic F.		Women's dress goods cashmere, cotton warp, 22-inch, Hamilton.	
	Average price, 12 garments.	Relative price.	Average price per yard	Relative price	Average price per yard	Relative price	Average price per yard.	Relative price.	Average price per yard	Relative price.
Average, 1890-1899.	$15.57	100.0	$0.0680	100.0	$0.2905	100.0	$0.1520	100.0	$0.0758	100.0
1890.	16.65	106.9	.0735	108.1	.3479	119.8	.1813	119.3	.0833	109.9
1891.	17.55	112.7	.0735	108.1	.3663	126.1	.1813	119.3	.0833	109.9
1892	17.55	112.7	.0723	106.3	.3724	128.2	.1789	117.7	.0821	108.3
1893	17.55	112.7	.0711	104.6	.3247	111.8	.1495	98.4	.0809	106.7
1894.	14.85	95.4	.0686	100.9	.2450	84.3	.1348	88.7	.0760	100.3
1895.	14.40	92.5	.0637	93.7	.2352	81.0	.1274	83.8	.0735	97.0
1896.	14.40	92.5	.0637	93.7	.1960	67.5	.1270	83.6	.0711	93.8
1897.	14.40	92.5	.0637	93.7	.2389	82.2	.1372	90.3	.0686	90.5
1898.	14.85	95.4	.0637	93.7	.2573	88.6	.1434	94.3	.0686	90.5
1899.	13.50	86.7	.0657	96.6	.3208	110.4	.1593	104.8	.0706	93.1
1900.	14.85	95.4	.0711	104.6	.3459	119.1	.1642	108.0	.0760	100.3
1901.	14.85	95.4	.0711	104.6	.3234	111.3	.1585	104.3	.0760	100.3
1902.	14.85	95.4	.0705	103.7	.3234	111.3	.1642	108.0	.0754	99.5
1903.	[d]16.20	[d]95.4	.0690	101.5	.3320	114.3	.1679	110.5	.0741	97.8
1904.	[d]16.20	[d]95.4	.0764	112.4	.3418	117.7	.1740	114.5	.0809	106.7
1905.	[d]16.20	[d]95.4	[e].1150	[e]114.9	.3730	128.4	.2017	132.7	[f].1867	[f]107.7
1906.	[d]18.00	[d]106.0	[e].1217	[e]121.6	.3920	134.9	.2156	141.8	[f].1900	[f]109.6
1907.	[d]18.00	[d]106.0	[e].1250	[e]124.9	.3920	134.9	.2234	147.0	[f].1908	[f]110.1

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[a] Average for 1892-1899.

[b] Records destroyed. Price estimated by person who furnished data for later years.

[c] 21 to 22 ounce. For average price in 1902 and method of computing relative price, see pages 327 and 328.

[d] 60 per cent wool, etc. For average price in 1902 and method of computing relative price, see pages 327 and 328.

[e] Danish cloth, cotton warp and worsted filling, 22-inch. For method of computing relative price, see pages 327 and 328. Average price, 1904, $0.1125.

[f] Poplar cloth, cotton warp and filling, 36-inch. For method of computing relative price, see pages 327 and 328. Average price, 1904, $0.1850.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Cloths and clothing									
	Women's dress goods cashmere, cotton warp, 27-inch, Hamilton.		Women's dress goods, Franklin sackings, 6-4.		Wool Ohio, fine fleece (X and XX grade), scoured.		Wool Ohio, medium fleece (¼ and ⅜ grade), scoured.		Worsted yarns: 2-40s, Australian fine.	
	Average price per yard.	Relative price	Average price per yard.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	$0.0883	100.0	$0.5151	100.0	$0.5726	100.0	$0.4564	100.0	$1.0183	100.0
1890	.0980	111.0	.5938	115.3	.7156	129.5	.6143	131.6	1.2263	120.4
1891	.0980	111.0	.6175	119.9	.6857	121.1	.5820	127.5	1.2354	121.3
1892	.0968	109.6	.6175	119.9	.6119	110.7	.5276	115.6	1.2175	119.6
1893	.0937	106.1	.6056	117.6	.5639	102.0	.4620	101.2	1.1342	111.4
1894	.0907	102.7	.4988	96.8	.4448	80.5	.3542	77.6	.9292	91.3
1895	.0846	95.8	.4342	84.3	.3768	68.2	.3280	71.9	.7425	72.9
1896	.0821	93.0	.4156	80.7	.3940	71.3	.3186	69.8	.7250	71.2
1897	.0784	88.8	.4235	82.2	.4955	89.7	.3999	87.6	.8517	83.6
1898	.0784	88.8	.4552	88.4	.6150	111.3	.4805	105.3	1.0308	101.2
1899	.0821	93.0	.4889	94.9	.6232	112.8	.4966	108.8	1.0908	107.1
1900	.0882	99.9	.6096	118.3	.6594	119.3	.5296	116.0	1.2050	118.3
1901	.0907	102.7	.5383	104.5	.5453	98.7	.4315	94.5	1.0404	102.2
1902	.0901	102.0	.5581	108.3	.5770	104.4	.4436	97.2	1.1229	110.3
1903	.0894	101.2	.5898	114.5	.6546	118.5	.4658	102.1	1.1771	115.6
1904	.0976	110.5	.5839	113.4	.6862	124.2	.4869	106.7	1.1875	116.6
1905	.1072	121.4	.6749	131.0	.7591	137.4	.5348	117.2	1.2525	123.0
1906	[a] .1911	[a]124.6	.6868	133.3	.7181	129.9	.5125	112.3	1.2933	127.0
1907	[a] .1960	[a]127.8	.6531	126.8	.7181	129.9	.5158	113.0	1.2967	127.3

Year.	Cloths, etc.		Fuel and lighting							
	Worsted yarns 2-40s, XXX, white, in skeins		Candles adamantine, 6s, 14-ounce		Coal anthracite, broken.		Coal anthracite, chestnut.		Coal anthracite, egg.	
	Average price per pound.	Relative price.	Average price per pound	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price	Average price per ton.	Relative price.
Average, 1890-1899	$1.0071	100.0	$0.0782	100.0	$3.3669	100.0	$3.5953	100.0	$3.5936	100.0
1890	1.2500	124.1	.0800	102.3	3.4858	103.5	3.3533	93.3	3.6142	100.6
1891	1.2625	125.4	.0800	102.3	3.4433	102.3	3.4758	96.7	3.7508	104.4
1892	1.1563	114.8	.0800	102.3	3.6152	107.4	3.9443	109.7	3.9803	110.8
1893	1.0833	107.6	.0883	112.9	3.5628	105.8	4.1673	115.9	3.8520	107.2
1894	.9188	91.2	.0867	110.9	3.4172	101.5	3.5416	98.5	3.3903	94.3
1895	.7563	75.1	.0850	108.7	3.2833	97.5	2.9793	82.9	3.0296	84.3
1896	.7500	74.5	.0850	108.7	3.2691	97.1	3.5561	98.9	3.5490	98.8
1897	.8188	81.3	.0745	95.3	3.2465	96.4	3.7366	103.9	3.7986	105.7
1898	1.0042	99.7	.0613	78.4	3.2108	95.4	3.5525	98.8	3.5993	100.2
1899	1.0708	106.3	.0613	78.4	3.1350	93.1	3.6458	101.4	3.3714	93.8
1900	1.1938	118.5	.1059	135.4	3.2706	97.1	3.9166	108.9	3.5843	99.7
1901	1.0283	102.1	.1100	140.7	3.5508	105.5	4.3270	120.4	4.0565	112.9
1902	[b] 1.1392	[b]113.1	.1100	140.7	3.7186	110.4	4.4597	124.0	4.3673	121.5
1903	[b] 1.2125	[b]120.4	.0996	127.4	4.2496	126.2	4.8251	134.2	4.8251	134.3
1904	[b] 1.1717	[b]116.3	.0900	115.1	4.2473	126.1	4.8250	134.2	4.8227	134.2
1905	[b] 1.2733	[b]126.4	.0858	109.7	4.2134	125.1	4.8226	134.1	4.8246	134.3
1906	[b] 1.3092	[b]130.0	.0766	98.0	4.2021	124.8	4.8601	135.2	4.8629	135.3
1907	[b] 1.2933	[b]128.4	.0741	94.8	4.2040	124.9	4.8204	134.1	4.8211	134.2

[a] Cashmere, cotton warp, 36-inch, Hamilton. For method of computing relative price, see pages 327 and 328. Average price, 1905, $0.1862.

[b] Designated as XXXX.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Fuel and lighting									
	Coal anthracite, stove.		Coal: bituminous, Georges Creek (at mine)		Coal: bituminous, Georges Creek (f. o. b. N. Y. Harbor).		Coal bit. Pittsburg (Youghiogheny)		Coke: Connellsville, furnace.	
	Average price per ton	Relative price	Average price per ton	Relative price	Average price per ton	Relative price	Average price per bushel	Relative price	Average price per ton	Relative price.
Average, 1890-1899	$3.7949	100.0	$0.8887	100.0	$2.7429	100.0	$0.0643	100.0	$1.6983	100.0
1890	3.7108	97.8	.8625	97.1	2.9875	108.9	.0664	103.3	2.0833	122.7
1891	3.8542	101.6	.9500	106.9	3.0313	110.5	.0789	122.7	1.8750	110.4
1892	4.1532	109.4	.9000	101.3	2.9313	106.9	.0749	116.5	1.8083	106.5
1893	4.1931	110.5	.9208	103.6	2.9500	107.6	.0758	117.9	1.4792	87.1
1894	3.6003	94.9	.8208	92.4	2.7375	99.8	.0634	98.6	1.0583	62.3
1895	3.1264	82.4	.7750	87.2	2.8125	102.5	.0600	93.3	1.3250	78.0
1896	3.7942	100.0	.9000	101.3	2.6625	97.1	.0573	89.1	1.8750	110.4
1897	4.0146	105.8	.8333	93.8	2.4417	89.0	.0570	88.6	1.6167	95.2
1898	3.7978	100.1	.9125	102.7	2.1750	79.3	.0565	87.9	1.6771	98.8
1899	3.7047	97.6	1.0125	113.9	2.7000	98.4	.0531	82.6	2.1854	128.7
1900	3.9451	104.0	1.2000	135.0	2.9083	106.0	.0752	117.0	2.6458	155.8
1901	4.3224	113.9	1.3375	150.5	2.9250	106.6	.0752	117.0	1.9625	115.6
1902	4.4627	117.6	2.1250	239.1	4.0583	148.0	.0787	122.4	2.6875	158.2
1903	4.8245	127.1	2.3958	269.6	4.4375	161.8	.0925	143.9	2.9125	171.5
1904	4.8246	127.1	1.7500	196.9	3.1958	116.5	.0852	132.5	1.6375	96.4
1905	4.8226	127.1	1.6000	180.0	3.1500	114.8	.0800	124.4	2.2875	134.7
1906	4.8615	128.1	1.5500	174.4	3.1250	[a]113.9	.0789	122.7	2.6750	157.5
1907	4.8215	127.1	1.5375	173.0	3.2375	118.0	.0824	128.1	2.8250	166.3

Year.	Fuel and lighting								Metals and implements.	
	Matches parlor, domestic		Petroleum crude		Petroleum refined, for export		Petroleum refined, 150°, w. w.		Augers extra, ¾-inch.	
	Average price 144 boxes (200s)	Relative price	Average price per barrel	Relative price	Average price per gallon.	Relative price.	Average price per gallon.	Relative price	Average price each.	Relative price.
Average, 1890-1899	$1.7563	100.0	$0.9102	100.0	$0.0649	100.0	$0.0890	100.0	$0.1608	100.0
1890	1.9583	111.5	.8680	95.4	.0733	112.9	.0995	111.8	.1900	118.2
1891	1.7500	99.6	.6697	73.6	.0685	105.5	.0879	98.8	.1900	118.2
1892	1.7500	99.6	.5564	61.1	.0609	93.8	.0794	89.2	.1900	118.2
1893	1.7500	99.6	.6399	70.3	.0522	80.4	.0725	81.5	.1800	111.9
1894	1.6667	94.9	.8389	92.2	.0515	79.4	.0725	81.5	.1542	95.9
1895	1.6875	96.1	1.3581	149.2	.0711	109.6	.0922	103.6	.1333	82.9
1896	1.7500	99.6	1.1789	129.5	.0702	108.2	.1039	116.7	.1394	86.7
1897	1.7500	99.6	.7869	86.5	.0597	92.0	.0900	101.1	.1425	88.6
1898	1.7500	99.6	.9118	100.2	.0628	96.8	.0909	102.1	.1425	88.6
1899	1.7500	99.6	1.2934	142.1	.0791	121.9	.1015	114.0	.1465	91.1
1900	1.7500	99.6	1.3521	148.5	.0854	131.6	.1188	133.5	.2000	124.4
1901	1.7500	99.6	1.2095	132.9	.0749	115.4	.1096	123.1	.1700	105.7
1902	1.5833	90.1	1.2369	135.9	.0734	113.1	.1108	124.5	.1800	111.9
1903	1.5000	85.4	1.5886	174.5	.0860	132.5	.1363	153.1	.2310	143.7
1904	1.5000	85.4	1.6270	178.8	.0826	127.3	.1367	153.6	.2400	149.3
1905	1.5000	85.4	1.3842	152.1	.0722	111.2	.1263	141.9	.3067	190.7
1906	1.5000	85.4	1.5975	175.5	.0762	117.4	.1300	146.1	.3567	221.8
1907	1.5000	85.4	1.7342	190.5	.0824	127.0	.1346	151.2	.3600	223.9

[a] These figures are correct, those given for 1906 in Bulletin No. 69 were slightly in error.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890–1899)—Continued.

Year.	Metals and implements.									
	Axes M.C.O., Yankee.		Bar iron best refined, from mill (Pittsburg market).		Bar iron, best refined, from store (Philadelphia market)		Barb wire: galvanized.		Butts: loose joint, cast, 3 x 3 inch.	
	Average price each.	Relative price.	Average price per lb.	Relative price	Average price per lb	Relative price	Average price per 100 lbs.	Relative price.	Average price per pair.	Relative price.
Average, 1890–1899	$0.4693	100.0	$0.0145	100.0	$0.0164	100.0	$2.5261	100.0	$0.0316	100.0
1890	.5650	120.4	.0184	126.9	.0205	125.0	3.5665	141.2	.0353	111.7
1891	.5550	118.3	.0171	117.9	.0190	115.9	3.2189	127.4	.0353	111.7
1892	.5000	106.5	.0164	113.1	.0187	114.0	2.7662	109.5	.0306	96.8
1893	.5000	106.5	.0150	103.4	.0170	103.7	2.5188	99.7	.0311	98.4
1894	.4733	100.9	.0120	82.8	.0134	81.7	2.1750	86.1	.0303	95.9
1895	.4600	98.0	.0125	86.2	.0144	87.8	2.2458	88.9	.0317	100.3
1896	.4150	88.4	.0122	84.1	.0140	85.4	1.9625	77.7	.0329	104.1
1897	.3938	83.9	.0110	75.9	.0131	79.9	1.8000	71.3	.0306	96.8
1898	.3750	79.9	.0107	73.8	.0128	78.0	1.8375	72.7	.0292	92.4
1899	.4555	97.1	.0195	134.5	.0207	126.2	3.1696	125.5	.0292	92.4
1900	.4831	102.9	.0215	148.3	.0196	119.5	3.3942	134.4	.0400	126.6
1901	.4166	88.8	.0180	124.1	.0184	112.2	3.0375	120.2	.0369	116.8
1902	.4833	103.0	.0194	133.8	.0213	129.9	2.9542	116.9	.0400	126.6
1903	.5050	107.6	.0177	122.1	.0200	122.0	2.7375	108.4	.0400	126.6
1904	.5788	123.3	.0148	102.1	.0172	104.9	2.5075	99.3	.0400	126.6
1905	.6323	134.7	.0187	129.0	.0192	117.1	2.3829	94.3	.0400	126.6
1906	.6715	143.1	[a] .0169	[a] 126.8	.0198	120.7	2.4283	96.1	.0400	126.6
1907	.6800	144.9	[a] .0175	[a] 131.3	.0211	128.7	2.6342	104.3	.0400	126.6

Year.	Chisels extra, socket firmer, 1-inch.		Copper ingot, lake.		Copper sheet, hot-rolled (base sizes).		Copper wire bare.		Doorknobs: steel, bronze plated.	
	Average price each.	Relative price	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pair.	Relative price.
Average, 1890–1899	$0.1894	100.0	$0.1234	100.0	$0.1659	100.0	$0.1464	100.0	$0.1697	100.0
1890	.2100	110.9	.1575	127.6	.2275	137.1	.1875	128.1	.1660	97.8
1891	.2100	110.9	.1305	105.8	.1900	114.5	.1650	112.7	.1660	97.8
1892	.2100	110.9	.1154	93.5	.1600	96.4	.1438	98.2	.1660	97.8
1893	.1933	102.1	.1093	88.6	.1500	90.4	.1350	92.2	.1660	97.8
1894	.1733	91.5	.0948	76.8	.1425	85.9	.1156	79.0	.1660	97.8
1895	.1710	90.3	.1075	87.1	.1425	85.9	.1238	84.6	.1953	115.1
1896	.1793	94.7	.1097	88.9	.1425	85.9	.1356	92.6	.1733	102.1
1897	.1710	90.3	.1132	91.7	.1463	88.2	.1375	93.9	.1660	97.8
1898	.1720	90.8	.1194	96.8	.1400	84.4	.1375	93.9	.1660	97.8
1899	.2038	107.6	.1767	143.2	.2175	131.1	.1825	124.7	.1660	97.8
1900	.2417	127.6	.1661	134.6	.2067	124.6	.1800	123.0	.1813	106.8
1901	.2300	121.4	.1687	136.7	.2088	125.9	.1815	124.0	.1900	112.0
1902	.2700	142.6	.1201	97.3	.1783	107.5	.1326	90.6	.2153	126.9
1903	.2800	147.8	.1368	110.9	.1917	115.6	.1497	102.3	.2250	132.6
1904	.3000	158.4	.1311	106.2	.1800	108.5	.1438	98.2	.2458	144.8
1905	.3967	209.5	.1576	127.7	.1992	120.1	.1702	116.3	.3625	213.6
1906	.4188	221.1	.1961	158.9	.2375	143.2	.2108	144.0	.4408	259.8
1907	.4438	234.3	.2125	172.2	.2792	168.3	.2402	164.1	.4500	265.2

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[a] Bar iron common to best refined (Pittsburg market). For method of computing relative price, see pages 327 and 328. Average price, 1905, $0.0172.

Table IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year	Metals and implements									
	Files, 8-inch mill bastard.		Hammers, Maydole No. 1½.		Lead, pig.		Lead pipe.		Locks, common mortise.	
	Average price per dozen.	Relative price.	Average price each.	Relative price.	Average price per pound.	Relative price.	Average price per 100 lbs.	Relative price.	Average price each.	Relative price.
Average, 1890-1899.	$0.8527	100.0	$0.3613	100.0	$0.0381	100.0	$4.8183	100.0	$0.0817	100.0
1890	.9100	106.7	.3500	96.9	.0440	115.5	5.4000	112.1	.0830	101.6
1891	.8917	104.6	.3500	96.9	.0437	114.7	5.6000	116.2	.0830	101.6
1892	.8717	102.2	.3500	96.9	.0413	108.4	5.1833	107.6	.0830	101.6
1893	.8667	101.6	.3500	96.9	.0374	98.2	5.0000	103.8	.0830	101.6
1894	.8300	97.3	.3500	96.9	.0331	86.9	4.4333	92.0	.0818	100.1
1895	.8133	95.4	.3525	97.6	.0326	85.6	4.2000	87.2	.0833	102.0
1896	.7775	91.2	.3800	105.2	.0300	78.7	4.1000	85.1	.0867	106.1
1897	.8050	94.4	.3800	105.2	.0358	94.0	4.3167	89.6	.0833	102.0
1898	.8250	96.8	.3633	100.6	.0380	99.7	4.6000	95.5	.0750	91.8
1899	.9358	109.7	.3867	107.0	.0448	117.6	5.3500	111.0	.0750	91.8
1900	1.0900	127.8	.4180	115.9	.0445	116.8	5.1208	106.3	.0788	96.5
1901	1.0500	123.1	.4233	117.2	.0438	115.0	5.0479	104.8	.0750	91.8
1902	1.0500	123.1	.4233	117.2	.0411	107.9	5.2167	108.3	.0850	104.0
1903	1.0500	123.1	.4660	129.0	.0428	112.3	5.1958	107.8	.0900	110.2
1904	1.0400	122.0	.4660	129.0	.0443	116.3	4.7950	99.5	.1025	125.5
1905	1.0367	121.6	.4660	129.0	.0479	125.7	5.2250	108.4	.1496	183.1
1906	1.0217	119.8	.4660	129.0	.0588	154.3	6.4208	133.3	.1808	221.3
1907	.9975	117.0	.4660	129.0	.0552	144.9	6.7050	139.2	.2000	244.8

Year.	Nails, cut, 8-penny, fence and common.		Nails, wire, 8-penny, fence and common.		Pig iron, Bessemer.		Pig iron, foundry No. 1.		Pig iron: foundry No. 2.	
	Average price per 100 lbs.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899.	$1.8275	100.0	$2.1618	100.0	$13.7783	100.0	$14.8042	100.0	$13.0583	100.0
1890	2.2875	125.2	2.9646	137.1	18.8725	137.0	18.4083	124.3	17.1583	131.4
1891	1.8333	100.3	2.4667	114.1	15.9500	115.8	17.5208	118.4	15.3958	117.9
1892	1.7583	96.2	2.1896	101.3	14.3667	104.3	15.7492	106.4	13.7729	105.5
1893	1.6813	92.0	1.9917	92.1	12.8692	93.4	14.5167	98.1	12.4396	95.3
1894	1.5271	83.6	1.6521	76.4	11.3775	82.6	12.6642	85.5	10.8458	83.1
1895	1.9250	105.3	2.1177	98.0	12.7167	92.3	13.1033	88.5	11.6750	89.4
1896	2.7125	148.4	2.9250	135.3	12.1400	88.1	12.9550	87.5	11.7708	90.2
1897	1.3329	72.9	1.4854	68.7	10.1258	73.5	12.1008	81.7	10.1000	77.4
1898	1.1927	65.3	1.4375	66.5	10.3317	75.0	11.6608	78.8	10.0271	76.8
1899	2.0240	110.8	2.3875	110.4	19.0333	138.1	19.3633	130.8	17.3500	132.9
1900	2.2500	123.1	2.6333	121.8	19.4925	141.5	19.9800	135.0	18.5063	141.8
1901	2.1125	115.6	2.3646	109.4	15.9350	115.7	15.8683	107.2	14.7188	112.8
1902	2.1333	116.7	2.1042	97.3	20.6742	150.0	22.1933	149.9	21.2396	162.7
1903	2.1958	120.2	2.0750	96.0	18.9758	137.7	19.9158	134.5	19.1417	146.6
1904	1.8188	99.5	1.9063	88.2	13.7558	99.8	15.5725	105.2	13.6250	104.4
1905	1.8250	99.9	1.8958	87.7	16.3592	118.7	17.8850	120.8	16.4104	125.7
1906	1.9313	105.7	1.9583	90.6	19.5442	141.8	20.9825	141.7	19.2667	147.6
1907	2.1625	118.3	2.1167	97.9	22.8417	165.8	23.8950	161.4	23.8688	182.9

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Metals and implements									
	Pig iron: gray forge, southern, coke.		Planes: Bailey No. 5		Quicksilver.		Saws: crosscut, Disston.		Saws: hand, Disston No. 7.	
	Average price per ton.	Relative price.	Average price each.	Relative price.	Average price per pound.	Relative price.	Average price each.	Relative price.	Average price per dozen.	Relative price.
Average, 1890-1899..	$11.0892	100.0	$1.3220	100.0	$0.5593	100.0	$1.6038	100.0	$12.780	100.0
1890.........	14.5000	130.8	1.4200	107.4	.7300	130.5	1.6038	100.0	12.400	112.7
1891..........	12.5167	112.9	1.4200	107.4	.6283	112.3	1.6038	100.0	12.600	98.6
1892.........	11.7917	106.3	1.4200	107.4	.5642	100.9	1.6038	100.0	12.600	98.6
1893.........	10.6354	95.9	1.4200	107.4	.5213	93.2	1.6038	100.0	12.600	98.6
1894.........	8.9375	80.6	1.3783	104.3	.4792	85.7	1.6038	100.0	12.600	98.6
1895.........	10.3229	93.1	1.2417	93.9	.5133	91.8	1.6038	100.0	12.600	98.6
1896.........	9.6042	86.6	1.2300	93.0	.4979	89.0	1.6038	100.0	12.600	98.6
1897.........	8.8021	79.4	1.2300	93.0	.5157	92.2	1.6038	100.0	12.600	98.6
1898.........	8.7188	78.6	1.2300	93.0	.5425	97.0	1.6038	100.0	12.600	98.6
1899.........	15.0625	135.8	1.2300	93.0	.6004	107.3	1.6038	100.0	12.600	98.6
1900.........	15.6042	140.7	1.4142	107.0	.6769	121.0	1.6038	100.0	12.600	98.6
1901.........	12.5521	113.2	1.4600	110.4	.6629	118.5	1.6038	100.0	12.600	98.6
1902.........	17.6042	158.8	1.5100	114.2	.6458	115.5	1.6038	100.0	12.600	98.6
1903.........	16.2292	146.4	1.5300	115.7	.6342	113.4	1.6038	100.0	12.600	98.6
1904.........	11.6771	105.3	1.5300	115.7	.5900	105.5	1.6038	100.0	12.600	98.6
1905.........	14.4896	130.7	1.5300	115.7	.5446	97.4	1.6038	100.0	12.600	98.6
1906.........	16.5313	149.1	1.7100	129.3	.5517	98.6	1.6038	100.0	12.950	101.3
1907.........	20.9875	189.3	1.5300	115.7	.5429	97.1	1.6038	100.0	12.950	101.3

Year.	Shovels: Ames No. 2		Silver: bar, fine.		Spelter, western.		Steel billets		Steel rails	
	Average price per dozen.	Relative price.	Average price per ounce.	Relative price.	Average price per pound.	Relative price.	Average price per ton.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899..	$7.8658	100.0	$0.74899	100.0	$0.0452	100.0	$21.5262	100.0	$26.0654	100.0
1890.........	7.8700	100.1	1.05329	140.6	.0554	122.6	30.4675	141.5	31.7792	121.9
1891.........	7.8700	100.1	.99034	132.2	.0508	112.4	25.3292	117.7	29.9167	114.8
1892.........	7.8700	100.1	.87552	116.9	.0465	102.9	23.6308	109.8	30.0000	115.1
1893.........	7.8700	100.1	.78219	104.4	.0410	90.7	20.4358	94.9	28.1250	107.9
1894.........	7.4500	94.7	.64043	85.5	.0355	78.5	16.5783	77.0	24.0000	92.1
1895.........	7.4500	94.7	.66268	88.5	.0362	80.1	18.4842	85.9	24.3333	93.4
1896.........	7.8100	99.3	.68195	91.0	.0401	88.7	18.8333	87.5	28.0000	107.4
1897.........	7.9300	100.8	.60775	81.1	.0421	93.1	15.0800	70.1	18.7500	71.9
1898.........	7.9300	100.8	.59065	78.9	.0453	100.2	15.3058	71.1	17.6250	67.6
1899.........	8.6075	109.4	.60507	80.8	.0588	130.1	31.1167	144.6	28.1250	107.9
1900.........	9.1200	115.9	.62065	82.9	.0442	97.8	25.0625	116.4	32.2875	123.9
1901.........	9.1200	115.9	.59703	79.7	.0405	89.6	24.1308	112.1	27.3333	104.9
1902.........	9.3550	118.9	.52816	70.5	.0487	107.7	30.5992	142.1	28.0000	107.4
1903.........	8.0200	102.0	.54208	72.4	.0558	123.5	27.9117	129.7	28.0000	107.4
1904.........	7.6533	97.3	.57844	77.2	.0515	113.9	22.1792	103.0	28.0000	107.4
1905.........	7.6200	96.9	.61008	81.5	.0592	131.0	24.0283	111.6	28.0000	107.4
1906.........	7.6200	96.9	.67379	90.0	.0620	137.2	27.4475	127.5	28.0000	107.4
1907.........	7.8400	99.7	.65979	88.1	.0617	136.5	29.2533	135.9	28.0000	107.4

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Metals and implements.									
	Steel sheets black, No. 27.		Tin: pig.		Tin plates domestic, Bessemer, coke.		Tin plates imported, Bessemer, coke.		Trowels: M. C. O., brick, 10½-inch.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per 108 lbs.[a]	Relative price.	Average price each.	Relative price.
Average, 1890-1899	[b]$0.0224	100.0	$0.1836	100.0	[c]$3.4148	100.0	[d]$4.5862	100.0	$0.3400	100.0
1890	....	....	.2121	115.5	....	....	4.7958	104.6	.3400	100.0
1891	....	....	.2025	110.3	....	....	5.3367	116.4	.3400	100.0
1892	....	....	.2037	110.9	....	....	5.3050	115.7	.3400	100.0
1893	....	....	.2002	109.0	....	....	5.3717	117.1	.3400	100.0
1894	.0235	104.9	.1812	98.7	....	....	4.8917	106.7	.3400	100.0
1895	.0244	108.9	.1405	76.5	....	....	3.8725	84.4	.3400	100.0
1896	.0215	96.0	.1330	72.4	3.4354	100.6	3.8000	82.9	.3400	100.0
1897	.0195	87.1	.1358	74.0	3.1823	93.2	3.9025	85.1	.3400	100.0
1898	.0190	84.8	.1551	84.5	2.8500	83.5	4.0000	87.2	.3400	100.0
1899	.0267	119.2	.2721	148.2	4.1913	122.7	(e)	....	.3400	100.0
1900	.0293	130.8	.3006	163.7	4.6775	137.0	(e)	....	.3400	100.0
1901	.0315	140.6	.2618	142.6	4.1900	122.7	(e)	....	.3400	100.0
1902	.0291	129.9	.2648	144.2	4.1233	120.7	(e)	....	.3400	100.0
1903	.0260	116.1	.2816	153.4	3.9400	115.4	(e)	....	.3400	100.0
1904	.0210	93.8	.2799	152.5	3.6025	105.5	(e)	....	.3400	100.0
1905	.0222	99.1	.3127	170.3	3.7067	108.5	(e)	....	.3400	100.0
1906	.0237	105.8	.3922	213.6	3.8608	113.1	(e)	....	.3400	100.0
1907	.0250	111.6	.3875	211.1	4.0000	119.8	(e)	....	.3400	100.0

Year.	Metals and implements.						Lumber and building materials.			
	Vises, solid box, 50-pound.		Wood screws, 1-inch, No. 10, flat head.		Zinc: sheet.		Brick: common domestic.		Carbonate of lead: American, in oil.	
	Average price each.	Relative price.	Average price per gross.	Relative price.	Average price per 100 lbs.	Relative price.	Average price per M.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	$3.9009	100.0	$0.1510	100.0	$5.3112	100.0	$5.5625	100.0	$0.0577	100.0
1890	4.1400	106.1	.1970	130.5	6.0542	114.0	6.5625	118.0	.0638	110.6
1891	4.1400	106.1	.2000	132.5	5.7192	107.7	5.7083	102.6	.0650	112.7
1892	4.2550	109.1	.2100	139.1	5.4900	103.4	5.7708	103.7	.0658	114.0
1893	4.1975	107.6	.2100	139.1	4.9942	94.0	5.8333	104.9	.0609	105.5
1894	4.0567	104.0	.1558	103.2	3.9500	74.4	5.0000	89.9	.0524	90.8
1895	3.7933	97.2	.1117	74.0	4.5217	85.1	5.3125	95.5	.0525	91.0
1896	3.7200	95.4	.1033	68.4	4.9400	93.0	5.0625	91.0	.0517	89.6
1897	3.5000	89.7	.0850	56.3	4.9400	93.0	4.9375	88.8	.0535	92.7
1898	3.2800	84.1	.0918	60.8	5.4983	103.5	5.7500	103.4	.0543	94.1
1899	3.9267	100.7	.1452	96.2	7.0042	131.9	5.6875	102.2	.0568	98.4
1900	4.2683	109.4	.1820	120.5	6.0950	114.8	5.2500	94.4	.0625	108.3
1901	5.0200	128.7	.1045	69.2	5.5583	104.7	5.7656	103.7	.0576	99.8
1902	5.1300	131.5	.0952	63.0	5.7308	107.9	5.3854	96.8	.0539	93.4
1903	5.1767	132.7	.1093	72.4	6.0183	113.3	5.9063	106.2	.0615	106.6
1904	4.2550	109.1	.0945	62.6	5.6092	105.6	7.4948	134.7	.0598	103.6
1905	4.1400	106.1	.1055	69.9	6.8250	128.5	8.1042	145.7	.0633	109.7
1906	4.5208	115.9	.1055	69.9	7.1725	135.0	8.5469	153.7	.0690	119.6
1907	5.7500	147.4	.1219	80.7	7.4858	140.9	6.1563	110.7	.0697	120.8

[a] Duty paid.

[b] Average for the period July, 1894, to December, 1899.

[c] Average for 1896-1899.

[d] Average for 1890-1898.

[e] Quotations discontinued.

Table IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Lumber and building materials.									
	Cement Portland, domestic.		Cement, Rosendale.		Doors Pine.		Hemlock.		Lime common.	
	Average price per barrel.	Relative price.	Average price per barrel.	Relative price.	Average price per door.	Relative price.	Average price per M feet.	Relative price.	Average price per barrel.	Relative price.
Average, 1890-1899	a$1.9963	100.0	$0.8871	100.0	$1.0929	100.0	$11.9625	100.0	$0.8332	100.0
1890			1.0542	118.8	1.3750	125.8	12.5833	105.2	.9792	117.5
1891			.9417	106.2	1.2500	114.4	12.4583	104.1	9125	109.5
1892			9688	109.2	1.2500	114.4	12.2917	102.8	.9292	111.5
1893			8875	100.0	1.2250	112.1	12.0000	100.3	9292	111.5
1894			9271	104.5	1.0500	96.1	11.7083	97.9	.8479	101.8
1895	1.9688	98.6	8521	96.1	9125	83.5	11.1458	93.2	.7813	93.8
1896	2.0000	100.2	8333	93.9	8375	76.6	11.1667	93.3	.6938	83.3
1897	1.9667	98.5	.7521	84.8	8125	74.3	11.0000	92.0	.7188	86.3
1898	1.9979	100.1	.7604	85.7	9250	84.6	11.7500	98.2	7417	89.0
1899	2.0479	102.6	8938	100.8	1.2917	118.2	13.5208	113.0	.7979	95.8
1900	2.1583	108.1	1.0167	114.6	1.5900	145.5	16.5000	137.9	.6833	82.0
1901	1.8896	94.7	1.0188	114.8	1.8913	173.1	15.0000	125.4	.7742	92.9
1902	1.9500	97.7	8646	97.5	2.1208	194.1	15.8333	132.4	.8058	96.7
1903	2.0292	101.6	8896	100.3	1.7292	158.2	16.7917	140.4	.7875	94.5
1904	1.4604	73.2	8021	90.4	1.6900	154.6	17.0000	142.1	.8246	99.0
1905	1.4271	71.5	.8333	93.9	b1.8367	b163.2	17.8750	149.4	.8908	106.9
1906	1.5750	78.9	.9500	107.1	b1.7271	b153.5	21.8958	183.0	.9471	113.7
1907	1.6458	82.4	.9500	107.1	b1.8842	b167.5	22.2500	186.0	9492	113.9

Year.	Linseed oil raw.		Maple hard.		Oak white, plain.		Oak white, quartered.		Oxide of zinc.	
	Average price per gallon.	Relative price.	Average price per M feet.	Relative price.	Average price per M feet.	Relative price.	Average price per M feet.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	$0.4535	100.0	$26.5042	100.0	$37.4292	100.0	$53.6771	100.0	$0.0400	100.0
1890	.6158	135.8	26.5000	100.0	37.8750	101.2	51.4583	95.9	.0425	106.3
1891	.4842	106.8	26.5000	100.0	38.0000	101.5	53.5833	99.8	.0419	104.8
1892	4083	90.0	26.5000	100.0	38.4583	102.7	53.0000	98.7	.0426	106.5
1893	4633	102.2	26.5000	100.0	38.7500	103.5	53.0000	98.7	.0413	103.3
1894	.5242	115.6	26.5000	100.0	37.2500	99.5	51.1250	95.2	.0373	93.3
1895	.5242	115.6	26.5000	100.0	36.2500	96.8	53.2500	99.2	.0350	87.5
1896	.3683	81.2	26.5000	100.0	36.2500	96.8	54.5000	101.5	.0383	95.8
1897	3275	72.2	26.5000	100.0	36.2500	96.8	53.8333	100.3	.0377	94.3
1898	3925	86.5	26.5000	100.0	36.2500	96.8	52.5000	97.8	.0396	99.0
1899	.4267	94.1	26.5417	100.1	38.9583	104.1	60.5208	112.7	.0438	109.5
1900	6292	138.7	27.5000	103.8	40.8333	109.1	64.4583	120.1	.0451	112.8
1901	6350	140.0	26.7083	100.8	36.7708	98.2	59.1667	110.2	.0438	109.5
1902	.5933	130.8	28.5833	107.8	40.8750	109.2	63.0833	117.5	.0440	110.0
1903	4167	91.9	31.6667	119.5	44.8333	119.8	74.7917	139.3	.0463	115.8
1904	.4158	91.7	31.0000	117.0	46.5000	124.2	80.7500	150.4	.0463	115.8
1905	.4675	103.1	30.5000	115.1	47.3333	126.5	80.2500	149.5	.0465	116.3
1906	.4050	89.3	31.0000	117.0	50.4167	134.7	79.1667	147.5	.0508	127.0
1907	.4342	95.7	32.2500	121.7	55.2083	147.5	80.0000	149.0	.0538	134.5

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a Average for 1895-1899.

b Doors western white pine, 2 feet 8 inches by 6 feet 8 inches, 1⅜ inches thick, 5 panel No 1, O. G. For method of computing relative price, see pages 327 and 328. Average price for 1904, $1.74.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Lumber and building materials.									
	Pine white, boards, No 2 barn (Buffalo market).		Pine white, boards, uppers (Buffalo market).		Pine yellow		Plate glass: polished, 3 to 5 sq ft.		Plate glass: polished, 5 to 10 sq ft	
	Average price per M feet.	Relative price.	Average price per M feet.	Relative price	Average price per M feet.	Relative price	Average price per sq ft.	Relative price	Average price per sq ft.	Relative price.
Average, 1890-1899	$17.1101	100.0	$46.5542	100.0	$18.4646	100.0	$0.3630	100.0	$0.5190	100.0
1890	16.7917	98.1	44.0833	94.7	20.7500	112.4	.5300	146.0	.7000	134.9
1891	17.0000	99.4	45.0000	96.7	19.9583	108.1	.5200	143.3	.6900	132.9
1892	17.1458	100.2	46.1417	98.9	18.5000	100.2	.4200	115.7	.5500	106.0
1893	18.6250	108.9	48.5000	104.2	18.5000	100.2	.4200	115.7	.5500	106.0
1894	18.1667	106.2	46.4167	99.7	18.5000	100.2	.3300	90.9	.4500	86.7
1895	17.2500	100.8	46.0000	98.8	16.9167	91.6	.3000	82.6	.4800	92.5
1896	16.5000	96.4	46.6250	100.2	16.4167	88.9	.3400	93.7	.5400	104.0
1897	15.8333	92.5	46.3333	99.5	16.4375	89.0	.2000	55.1	.3200	61.7
1898	15.5000	90.6	46.0833	99.0	18.6250	100.9	.2700	74.4	.4300	82.9
1899	18.2917	106.9	50.4583	108.4	20.0417	108.5	.3000	82.6	.4800	92.5
1900	21.5000	125.7	57.5000	123.5	20.7083	112.2	.3400	93.7	.5400	104.0
1901	20.8750	122.0	60.4167	129.8	19.6667	106.5	.3200	88.2	.4900	94.4
1902	23.5000	137.3	74.8333	160.7	21.0000	113.7	.2575	70.9	.4113	79.2
1903	24.0000	140.3	80.0000	171.8	21.0000	113.7	.2625	72.3	.4313	83.1
1904	23.0000	134.4	81.0000	174.0	21.4167	116.0	.2275	62.7	.3650	70.3
1905	24.1667	141.2	82.0000	176.1	24.9167	134.9	.2408	66.3	.3729	71.8
1906	29.7500	173.9	84.7500	182.0	29.3333	158.9	c.2267	c76.1	d.3300	d77.7
1907	a37.4167	a195.7	b97.0833	b200.2	30.5000	165.2	c.2300	c77.2	d.3400	d80.1

Year.	Poplar		Putty		Resin good, strained		Shingles cypress.		Shingles white pine, 18-inch	
	Average price per M feet	Relative price.	Average price per pound	Relative price	Average price per barrel	Relative price	Average price per M	Relative price	Average price per M	Relative price.
Average, 1890-1899	$31.3667	100.0	$0.0158	100.0	$1.4399	100.0	$2.8213	100.0	$3.7434	100.0
1890	30.5000	97.2	.0175	110.8	1.3844	96.1	3.3500	118.7	3.8417	102.6
1891	30.5000	97.2	.0175	110.8	1.4740	102.4	3.2500	115.2	4.0000	106.9
1892	30.6042	97.6	.0161	101.9	1.3417	93.2	3.1500	111.7	3.9063	104.4
1893	33.6250	107.2	.0160	101.3	1.2615	87.6	3.0000	106.3	3.8500	102.8
1894	31.7500	101.2	.0157	99.4	1.2510	86.9	2.8000	99.2	3.7500	100.2
1895	31.0000	98.8	.0145	91.8	1.5615	108.4	2.6500	93.9	3.7000	98.8
1896	31.0000	98.8	.0145	91.8	1.7458	121.2	2.5000	88.6	3.6125	96.5
1897	30.6667	97.8	.0145	91.8	1.6125	112.0	2.3500	83.3	3.5417	94.6
1898	30.0000	95.6	.0145	91.8	1.4208	98.7	2.5000	88.6	3.5521	94.9
1899	34.0208	108.5	.0168	106.3	1.3458	93.5	2.6625	94.4	3.6792	98.3
1900	37.6875	120.2	.0190	120.3	1.6021	111.3	2.8500	101.0	4.0000	106.9
1901	36.7083	117.0	.0150	94.9	1.5302	106.3	2.8500	101.0	4.1875	111.9
1902	42.1042	134.2	.0192	121.5	1.6125	112.0	2.6708	94.7	e3.5875	e123.0
1903	49.6458	158.3	.0141	89.2	2.2156	153.9	2.5667	91.0	e3.6500	e125.1
1904	50.3292	160.5	.0110	69.6	2.8333	196.8	2.6000	92.2	e3.5750	e122.5
1905	48.2083	153.7	.0109	69.0	3.4229	237.7	2.7250	96.6	e3.5000	e119.9
1906	50.9583	162.5	.0119	75.3	4.0146	278.8	3.2417	114.9	f2.2125	f157.2
1907	58.0833	185.2	.0120	75.9	4.3771	304.0	4.2250	149.8	f2.6958	f191.5

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[a] Pine: white, boards, No. 2, barn, 1 inch by 10 inches wide, rough (New York market). For method of computing relative price, see pages 327 and 328. Average price for 1906, $33.25.

[b] Pine, white, boards, uppers, 1-inch, 8 inches and up wide, rough (New York market). For method of computing relative price, see pages 327 and 328. Average price for 1906, $88.25.

[c] Plate glass. polished, glazing, area 3 to 5 square feet. For method of computing relative price, see pages 327 and 328. Average price for 1905, $0.1975.

[d] Plate glass polished, glazing, area 5 to 10 square feet. For method of computing relative price, see pages 327 and 328. Average price for 1905, $0.3050.

[e] Shingles Michigan white pine, 16 inches long, XXXX. For method of computing relative price, see pages 327 and 328. Average price for 1901, $3.2625.

[f] Shingles: red cedar, clears, random width, 16 inches long. For method of computing relative price, see pages 327 and 328. Average price for 1905, $1.6875.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year.	Lumber and building materials									
	Spruce		Tar.		Turpentine: spirits of.		Window glass: American, single, firsts, 6 x 8 to 10 x 15 inch.		Window glass: American, single, thirds, 6 x 8 to 10 x 15 inch.	
	Average price per M feet.	Relative price.	Average price per barrel.	Relative price	Average price per gallon	Relative price	Average price per 50 sq ft.	Relative price	Average price per 50 sq ft	Relative price.
Average, 1890-1899.	$14.3489	100.0	$1.2048	100.0	$0.3443	100.0	$2.1514	100.0	$1.8190	100.0
1890	16.2917	113.5	1.4750	122.4	.4080	122.0	2.2283	103.6	1.7858	98.2
1891	14.2183	99.1	1.5833	131.4	.3908	113.5	2.2125	102.8	1.7700	97.3
1892	14.8542	103.5	1.3000	107.9	.3227	96.5	1.9935	92.7	1.5948	•87.7
1893	13.7708	96.0	1.0458	86.8	.3002	89.8	2.1375	99.4	1.7100	94.0
1894	12.7083	88.6	1.0917	90.6	.2932	87.7	1.9918	92.6	1.6326	89.8
1895	14.2500	99.3	1.1417	94.8	.2923	87.4	1.5988	74.3	1.3919	76.5
1896	14.2500	99.3	1.0125	84.0	.2743	82.1	1.8021	83.8	1.6000	88.0
1897	14.0000	97.6	1.0542•	87.5	.2924	87.5	2.1986	102.2	1.9630	107.9
1898	13.7500	95.8	1.0979	91.1	.3321	96.4	2.6432	122.9	2.3428	128.8
1899	15.3958	107.3	1.2458	103.4	.4581	137.0	2.7081	125.9	2.3986	131.9
1900	17.3750	121.1	1.3625	113.1	.4913	142.7	2.6990	125.5	2.3194	127.5
1901	18.0000	125.4	1.2817	106.4	.3729	111.5	4.1282	191.9	3.2823	180.4
1902	19.2500	134.2	1.3250	110.0	.4740	141.8	3.2187	149.6	2.5649	141.0
1903	19.1875	133.7	1.6792	139.4	.5715	171.0	2.6400	122.7	2.1600	118.7
1904	20.5000	142.9	1.6792	139.4	.5757	172.2	2.8867	134.2	2.3283	128.0
1905	21.4167	149.3	1.7583	145.9	.6276	187.7	2.7637	•128.5	2.1365	117.5
1906	25.5417	178.0	1.9583	162.5	.6649	198.9	2.9196	135.7	2.2563	124.0
1907	24.0000	167.3	2.3292	193.3	.6344	189.8	2.8133	130.8	2.2419	123.2

Year.	Drugs and chemicals							
	Alcohol grain.		Alcohol wood, refined, 95 per cent.		Alum lump		Brimstone: crude, seconds.	
	Average price per gallon.	Relative price.	Average price per gallon.	Relative price	Average price per pound.	Relative price.	Average price per ton.	Relative price.
Average, 1890-1899.	$2.2405	100.0	$0.9539	100.0	$0.0167	100.0	$20.6958	100.0
1890	2.0717	92.5	1.1375	119.2	.0182	109.0	21.1458	102.2
1891	2.2150	98.9	1.1598	121.6	.0158	94.6	28.6042	138.2
1892	2.1417	95.6	1.2973	136.0	.0160	95.8	24.1458	116.7
1893	2.1808	97.3	1.2917	135.4	.0174	104.2	18.7292	90.5
1894	2.1521	96.1	.7198	75.5	.0169	101.2	16.5833	80.1
1895	2.3292	104.0	.8667	90.9	.0160	95.8	15.6250	75.5
1896	2.3008	102.7	.8500	89.1	.0164	98.2	17.9583	86.8
1897	2.2767	101.6	.6958	72.9	.0166	99.4	20.1250	97.2
1898	2.3250	103.8	.7500	78.6	.0165	98.8	22.9167	110.7
1899	2.4117	107.6	.7708	80.8	.0168	100.6	21.1250	102.1
1900	2.3867	106.5	.8000	83.9	.0175	104.8	21.1458	102.2
1901	2.4583	109.7	.6125	64.2	.0175	104.8	22.0000	106.3
1902	2.4057	107.4	.6417	67.3	.0175	104.8	23.4375	113.2
1903	2.3958	106.9	.5917	62.0	.0173	103.6	22.3333	107.9
1904	2.4325	108.6	.5875	61.6	.0175	104.8	21.7750	105.2
1905	2.4275	108.3	.6750	70.8	.0175	104.8	21.2667	102.8
1906	2.4642	110.0	.7000	73.4	.0175	104.8	22.1563	107.1
1907	2.5229	112.6	.3992	41.8	.0175	104.8	21.4983	103.9

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890–1899)—Continued.

Year.	Drugs and chemicals.							
	Glycerin refined.		Muriatic acid, 20°.		Opium: natural, in cases.		Quinine: American.	
	Average price per pound	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per ounce.	Relative price.
Average, 1890-1899	$0.1399	100.0	$0.0104	100.0	$2.3602	100.0	$0.2460	100.0
1890	.1767	126.3	.0104	100.0	2.6208	111.0	.3275	133.1
1891	.1538	109.9	.0098	94.2	1.9438	82.4	.2508	102.0
1892	.1396	99.8	.0121	116.3	1.6708	70.8	.2183	88.7
1893	.1346	96.2	.0101	97.1	2.3917	101.3	.2150	87.4
1894	.1194	85.3	.0088	84.6	2.2851	96.8	.2621	106.5
1895	.1204	86.1	.0083	79.8	1.8413	78.0	.2508	102.0
1896	.1671	119.4	.0075	72.1	2.0917	88.6	.2406	97.8
1897	.1308	93.5	.0109	104.8	2.3417	99.2	.1829	74.3
1898	.1238	88.5	.0128	123.1	3.3417	141.6	.2146	87.2
1899	.1329	95.0	.0135	129.8	3.0729	130.2	.2975	120.9
1900	.1515	108.3	.0135	129.8	3.2000	135.6	.3325	135.2
1901	.1504	107.5	.0150	144.2	3.2292	136.8	.3025	123.0
1902	.1444	103.2	.0168	161.5	2.8313	120.0	.2575	104.7
1903	.1446	103.4	.0160	153.8	3.0813	130.6	.2525	102.6
1904	.1396	99.8	.0160	153.8	2.7500	116.5	.2333	94.8
1905	.1238	88.5	.0160	153.8	3.0333	128.5	.2100	85.4
1906	.1129	80.7	.0135	129.8	2.9500	125.0	.1658	67.4
1907	.1383	98.9	.0135	129.8	4.9458	209.6	.1775	72.2

Year.	Drugs, etc.		House furnishing goods.					
	Sulphuric acid, 66°.		Earthenware: plates, cream-colored.		Earthenware: plates, white granite.		Earthenware: teacups and saucers, white granite.	
	Average price per pound	Relative price.	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.	Average price per gross (6 dozen cups and 6 dozen saucers).	Relative price.
Average, 1890-1899	$0.0089	100.0	$0.4136	100.0	$0.4479	100.0	$3.4292	100.0
1890	.0088	98.9	.4465	108.0	.4888	109.1	3.7600	109.6
1891	.0081	91.0	.4367	105.6	.4786	106.9	3.6817	107.4
1892	.0095	106.7	.4230	102.3	.4644	103.7	3.5720	104.2
1893	.0085	95.5	.4230	102.3	.4644	103.7	3.5720	104.2
1894	.0073	82.0	.4177	101.0	.4566	101.9	3.5250	102.8
1895	.0070	78.7	.3913	94.6	.4162	92.9	3.2374	94.4
1896	.0070	78.7	.3807	92.0	.3991	89.1	3.0907	90.1
1897	.0095	106.7	.3807	92.0	.3991	89.1	3.0907	90.1
1898	.0113	127.0	.4153	100.4	.4515	100.8	3.3595	98.0
1899	.0120	134.8	.4208	101.7	.4607	102.9	3.4026	99.2
1900	.0120	134.8	.4410	106.6	.4841	108.1	3.5750	104.3
1901	.0125	140.4	.4655	112.5	.5096	113.8	3.7632	109.7
1902	.0130	146.1	.4655	112.5	.5096	113.8	3.7632	109.7
1903	.0127	142.7	.4775	115.4	.4988	111.4	3.6832	107.4
1904	.0129	144.9	.4705	113.8	.4943	110.4	3.6503	106.4
1905	.0124	139.3	.4410	106.6	.4586	102.4	3.3869	98.8
1906	.0100	112.4	.4410	106.6	.4586	102.4	3.3869	98.8
1907	.0100	112.4	.4410	106.6	.4586	102.4	3.3869	98.8

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890–1899)—Continued.

Year.	House furnishing goods.							
	Furniture bedroom sets, ash.		Furniture chairs, bedroom, maple		Furniture chairs, kitchen.		Furniture tables, kitchen.	
	Average price per set	Relative price.	Average price per dozen.	Relative price	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.
Average, 1890-1899..	$10 555	100 0	$6 195	100 0	$3 8255	100 0	$14 435	100 0
1890.	12 000	113 7	7 000	113 0	4 2000	109 8	15 000	103 9
1891.......	12 000	113 7	7 000	113 0	4 2000	109 8	15 000	103 9
1892...........	12 000	113 7	6 850	110 6	4 2500	111 1	15 000	103 9
1893.	11 000	104 2	6 850	110 6	4 2500	111 1	15 000	103 9
1894.	11 000	101 2	6 000	96 9	3 5000	91 5	14 250	98 7
1895....	9 950	94 3	6 000	96 9	3 5000	91 5	14 250	98 7
1896..	8 750	82 9	6 000	96 9	3 5000	91 5	13 800	95 6
1897..	8 750	82 9	5 000	80 7	3 5000	91 5	13 800	95 6
1898.	10 000	94 7	5 125	82 7	3 3130	86 6	13 800	95 6
1899.. . .	10 100	95 7	6 125	98 9	4 0420	105 7	14 450	100 1
1900...	11 250	106 6	8 000	129 1	5 2080	136 1	15 600	108 1
1901..	11 250	106 6	7 000	113 0	4 7500	124 2	15 600	108 1
1902..	11 750	111 3	7.333	118 4	4 9167	128 5	15 600	108.1
1903...	12 167	115 3	7 917	127 8	5 0000	130 7	15 600	108 1
1904............. ..	12 250	116 1	8 000	129 1	4 7708	124 7	15 600	108 1
1905.......... ..	12 354	117 0	8 000	129 1	4 7500	124 2	15 600	108 1
1906......... . . .	12 958	122 8	8 917	143 9	5 1250	134 0	16 500	114 3
1907..... . . .	14 500	137 4	10 000	161 4	5 7917	151 4	18 000	124 7

Year.	Glassware nappies, 4-inch.		Glassware pitchers, ½ gallon, common.		Glassware tumblers, ⅓-pint, common.		Table cutlery: carvers, stag handles.	
	Average price per dozen.	Relative price.	Average price per dozen.	Relative price.	Average price per dozen.	Relative price	Average price per pair.	Relative price.
Average, 1890 1899..	$0 112	100 0	$1 175	100 0	$0 1775	100 0	$0 80	100 0
1890............ ..	120	107 1	1 250	106 4	1800	101 4	.80	100 0
1891...............	120	107 1	1 250	106 4	2000	112 7	80	100 0
1892..	120	107 1	1 250	106 4	1900	107 0	80	100 0
1893................	120	107 1	1 250	106 4	1900	107 0	.95	118 8
1894.	120	107.1	1 250	106 4	1900	107 0	.80	100 0
1895.	120	107 1	1 250	106 4	.1850	104 2	.80	100 0
1896........	100	89 3	1 250	106 4	1800	101 4	.80	100 0
1897.....	.100	89 3	1.000	85 1	.1700	95 8	.75	93 8
1898........	100	89 3	1.000	85 1	.1600	90 1	.75	93 8
1899.	100	89 3	1.000	85 1	.1300	73 2	.75	93 8
1900.................	100	89 3	1 000	85 1	.1800	101 4	.75	93 8
1901.	140	125 0	1 300	110 6	.1800	101 2	.75	93 8
1902.................	140	125 0	1 300	110 6	.1850	104 2	.75	93 8
1903.................	.140	125 0	1.300	110 6	.1767	99 5	.75	93 8
1904.................	140	125 0	1 150	97 9	1600	90 1	.75	93 8
1905.................	140	125 0	1 050	89 4	1500	84 5	.75	93 8
1906.................	.140	125 0	1 050	89 4	.1500	84 5	75	93 8
1907.................	.140	125 0	1 050	89 4	.1500	84 5	.80	100 0

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Continued.

Year	House furnishing goods.						Miscellaneous.	
	Table cutlery, knives and forks, cocobolo handles.		Wooden ware, pails, oak-grained.		Wooden ware, tubs, oak-grained.		Cotton-seed meal.	
	Average price per gross.	Relative price.	Average price per dozen.	Relative price.	Average price per nest of 3.	Relative price.	Average price per ton of 2000 pounds.	Relative price.
Average, 1890-1899.	$6.0000	100.0	$1.2988	100.0	$1.3471	100.0	$21.9625	100.0
1890	7.7500	127.9	1.5917	122.6	1.6500	122.5	23.3750	100.4
1891	7.7500	127.9	1.4500	111.6	1.5667	116.3	25.2083	114.8
1892	6.8500	113.0	1.3500	103.9	1.4000	103.9	23.6958	107.9
1893	5.5000	90.8	1.3125	101.1	1.3083	97.1	25.7042	117.0
1894	5.5000	90.8	1.2583	96.9	1.2875	95.6	22.5583	102.7
1895	5.5000	90.8	1.1208	86.3	1.2500	92.8	18.9125	86.1
1896	5.5000	90.8	1.2625	97.2	1.2500	92.8	19.9375	90.8
1897	5.0000	82.5	1.2417	95.6	1.2500	92.8	20.4375	93.1
1898	5.5000	90.8	1.1333	87.3	1.2500	92.8	19.0000	86.5
1899	5.7500	94.9	1.2667	97.5	1.2583	93.4	20.7958	94.7
1900	5.7500	94.9	1.4917	114.9	1.4417	107.0	25.5458	116.3
1901	6.5000	107.3	1.5500	119.3	1.4500	107.6	25.0208	113.9
1902	6.5000	107.3	1.5500	119.3	1.4500	107.6	27.1333	123.5
1903	6.5000	107.3	1.5875	122.2	1.4500	107.6	26.7083	121.6
1904	6.6667	110.0	1.7000	130.9	1.4500	107.6	26.2000	119.3
1905	6.6875	110.1	1.7000	130.9	1.4500	107.6	26.3583	120.0
1906	6.0500	99.8	1.7000	130.9	1.4500	107.6	30.3917	138.4
1907	6.4833	107.0	1.9708	151.7	1.6000	118.8	28.7042	130.7

Year.	Miscellaneous.							
	Cotton-seed oil, summer yellow, prime.		Jute, raw.		Malt, western made.		Paper, news.	
	Average price per gallon.	Relative price.	Average price per pound.	Relative price.	Average price per bushel.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899.	$0.3044	100.0	$0.0359	100.0	$0.7029	100.0	$0.0299	100.0
1890	.3446	113.2	.0388	108.1	.7500	106.7	.0382	127.8
1891	.3567	117.2	.0371	103.3	.9271	131.9	.0340	113.7
1892	.3088	101.4	.0475	132.3	.8015	114.0	.0340	113.7
1893	.4550	149.5	.0346	96.4	.7750	110.3	.0318	106.4
1894	.3238	106.4	.0345	96.1	.7446	105.9	.0323	108.0
1895	.2721	89.4	.0279	77.7	.6854	97.5	.0308	103.0
1896	.2513	82.6	.0319	88.9	.5629	80.1	.0275	92.0
1897	.2365	77.7	.0373	103.9	.5438	77.4	.0271	90.6
1898	.2288	75.2	.0332	92.5	.6163	87.7	.0219	73.2
1899	.2663	87.5	.0365	101.7	.6221	88.5	.0209	69.9
1900	.3556	116.8	.0435	121.2	.6538	93.0	.0281	94.0
1901	.3571	117.3	.0400	111.4	.7450	106.0	.0226	75.6
1902	.4067	133.6	.0438	122.0	.7925	112.7	.0242	80.9
1903	.3977	130.7	.0464	129.2	.7246	103.1	.0253	84.6
1904	.3135	103.0	.0444	123.7	.6758	96.1	.0267	89.3
1905	.2696	88.6	a .0398	a 151.0	.6150	87.5	.0242	80.9
1906	.3613	118.7	a .0539	a 204.5	.6471	92.1	.0219	73.2
1907	.4869	160.0	a .0486	a 184.4	1.0346	147.2	.0249	83.3

[a] Jute, raw, M-double triangle, shipments. For method of computing relative price, see pages 327 and 328. Average price, 1904, $0.0326.

TABLE IV.—AVERAGE YEARLY ACTUAL AND RELATIVE PRICES OF COMMODITIES, 1890 TO 1907, AND BASE PRICES (AVERAGE FOR 1890-1899)—Concluded.

Year	Miscellaneous.							
	Paper: wrapping, manila.		Proof spirits.		Rope: manila, [illegible]-inch.		Rubber: Para Island.	
	Average price per pound.	Relative price.	Average price per gallon.	Relative price.	Average price per pound	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	$0.0553	100.0	$1.1499	100.0	$0.0934	100.0	$0.8007	100.0
1890	.0575	104.0	1.0533	91.6	.1494	160.0	.8379	104.6
1891	.0575	104.0	1.1052	96.1	.1038	111.1	.7908	98.8
1892	.0558	100.9	1.0757	93.5	.1148	122.9	.6763	84.5
1893	.0579	104.7	1.0713	93.2	.0919	98.4	.7167	89.5
1894	.0584	105.6	1.1326	98.5	.0770	82.4	.6744	84.2
1895	.0586	106.0	1.2109	105.3	.0735	78.7	.7425	92.7
1896	.0588	106.3	1.2031	104.6	.0664	71.1	.8000	99.9
1897	.0588	106.3	1.1830	102.9	.0631	67.6	.8454	105.6
1898	.0459	83.0	1.2220	106.3	.0842	90.1	.9271	115.8
1899	.0438	79.2	1.2421	108.0	.1094	117.1	.9951	124.3
1900	.0480	86.8	1.2460	108.4	.1320	141.3	.9817	122.6
1901	.0502	90.8	1.2861	111.8	.1092	116.9	.8496	106.1
1902	.0497	89.9	1.3138	114.3	.1348	144.3	.7273	90.8
1903	.0526	95.1	1.2809	111.4	[a] .1146	[a] 122.7	.9054	113.1
1904	.0530	95.8	1.2692	110.4	[a] .1171	[a] 125.4	1.0875	135.8
1905	.0525	94.9	1.2616	109.7	[a] .1195	[a] 127.9	1.2425	155.2
1906	.0500	90.4	1.2879	112.0	[a] .1252	[a] 134.0	1.2131	151.5
1907	.0506	91.5	1.3133	114.2	[a] .1290	[a] 138.1	1.0633	132.8

Year.	Soap: castile, mottled, pure.		Starch: laundry.		Tobacco: plug.		Tobacco: smoking, gran., Seal of N. C.	
	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.	Average price per pound.	Relative price.
Average, 1890-1899	$0.0569	100.0	$0.0348	100.0	$0.3962	100.0	$0.5090	100.0
1890	.0594	104.4	.0371	106.6	.4050	102.2	.5000	98.2
1891	.0621	109.1	.0426	122.4	.4008	101.2	.5000	98.2
1892	.0624	109.7	.0373	107.2	.3725	94.0	.5000	98.2
1893	.0615	108.1	.0366	105.2	.3967	100.1	.5000	98.2
1894	.0588	103.3	.0366	105.2	.4000	101.0	.5000	98.2
1895	.0507	89.1	.0363	104.3	.4000	101.0	.5000	98.2
1896	.0502	88.2	.0310	89.1	.3808	96.1	.5000	98.2
1897	.0531	93.3	.0300	86.2	.3758	94.9	.5000	98.2
1898	.0550	96.7	.0300	86.2	.4133	104.3	.5300	104.1
1899	.0558	98.1	.0300	86.2	.4175	105.4	.5600	110.0
1900	.0613	107.7	.0340	97.7	.4433	111.9	.5600	110.0
1901	.0655	115.1	.0363	104.3	.4658	117.6	.5600	110.0
1902	.0663	116.5	.0454	130.5	.4542	114.6	.5592	109.9
1903	.0658	115.6	.0431	123.9	.4500	113.6	.5700	112.0
1904	.0647	113.7	.0369	106.0	.4700	118.6	.5825	114.4
1905	.0650	114.2	.0329	94.5	.4900	123.7	.6000	117.9
1906	.0650	114.2	.0367	105.5	.4833	122.0	.6000	117.9
1907	.0671	117.9	.0404	116.1	.4700	118.6	.6000	117.9

[a] $\frac{7}{16}$-inch.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907.

[For explanation and discussion of this table, see pages 337 to 346. Average price for 1890-1899 -100.0.]

Year.	Farm products.										
			Grain.								
	Cotton upland, middling.	Flaxseed: No. 1.	Barley by sample	Corn: No 2, cash	Oats: cash.	Rye: No. 2, cash	Wheat. cash.	Average.	Hay: timothy, No. 1.	Hides: green, salted, packers, heavy native steers	Hops: New York State, choice.
1890....	142.9	125.5	111.6	103.8	115.6	103.0	118.9	110.6	95.8	99.6	148.0
1891....	110.8	97.1	134.5	151.0	144.1	157.6	128.1	143.0	117.8	101.5	149.1
1892....	99.0	91.4	112.2	118.3	113.2	127.7	101.9	115.3	113.5	92.8	141.4
1893....	107.2	97.7	103.3	101.2	105.2	92.6	90.1	99.1	107.4	79.9	128.2
1894....	90.2	121.6	113.2	113.7	115.7	88.1	74.4	101.0	99.9	68.4	85.5
1895....	94.0	111.8	94.8	104.0	88.3	91.2	79.9	91.6	109.1	109.7	53.1
1896....	102.0	72.9	65.7	67.8	67.0	66.5	85.4	70.5	99.0	86.6	49.5
1897....	92.2	78.1	71.2	66.9	67.9	74.9	105.8	77.3	80.9	106.3	65.5
1898....	76.9	99.8	95.9	82.6	91.9	93.8	117.8	96.4	79.9	122.8	91.5
1899....	84.7	104.0	97.6	87.6	91.2	104.4	94.7	95.1	96.6	131.8	88.3
1900....	123.8	145.7	106.2	100.2	84.5	97.9	93.7	96.5	110.9	127.4	83.7
1901....	111.1	145.8	129.8	130.6	118.3	100.8	95.7	115.0	123.0	132.0	97.1
1902....	115.1	135.0	139.4	156.9	147.3	102.5	98.7	129.0	120.9	142.8	134.1
1903....	144.7	94.1	121.2	121.1	131.7	97.5	105.1	115.3	119.2	124.8	159.5
1904....	155.9	99.6	116.9	132.6	135.8	133.4	138.3	131.4	112.5	124.4	196.2
1905....	123.1	107.6	107.0	131.7	111.2	134.5	134.5	123.8	107.9	152.6	150.9
1906....	142.0	99.1	112.8	121.8	122.1	115.5	105.6	115.6	124.3	164.7	92.0
1907....	153.0	106.1	169.0	138.8	167.4	145.4	120.8	148.3	162.4	155.3	98.1

Year	Live stock.										Average, farm products.
	Cattle.			Hogs			Sheep				
	Steers, choice to extra.	Steers, good to choice	Average.	Heavy	Light.	Average.	Native.	Western	Average.	Average.	
1890...	91.5	87.4	89.5	89.6	88.8	89.2	120.5	118.0	119.3	99.3	110.0
1891....	110.6	107.7	109.2	100.2	98.2	99.2	120.0	115.6	117.8	108.7	121.5
1892....	95.7	95.0	95.4	116.8	114.6	115.7	127.2	123.2	125.2	112.1	111.7
1893....	103.8	102.2	103.0	148.4	148.7	148.6	103.2	104.3	103.8	118.4	107.9
1894....	97.0	95.6	96.3	112.7	111.6	112.2	71.7	75.4	73.6	94.0	95.9
1895....	103.1	104.2	103.7	97.0	96.2	96.6	78.5	78.3	78.4	92.9	93.3
1896 ...	86.4	90.2	88.3	76.1	80.5	78.3	78.0	79.4	78.7	81.8	78.3
1897....	98.2	100.8	99.5	81.4	84.2	82.8	93.1	95.3	94.2	92.2	85.2
1898....	101.1	103.2	102.2	86.2	85.0	85.6	104.4	105.3	104.9	97.5	96.1
1899....	112.6	113.7	113.2	91.5	92.1	91.8	103.3	105.2	104.3	103.1	100.0
1900....	108.7	113.9	111.3	115.2	115.7	115.5	109.7	114.3	112.0	112.9	109.5
1901....	115.1	118.1	116.6	135.0	133.9	134.5	89.2	94.7	92.0	114.3	116.9
1902....	140.4	138.5	139.5	158.0	152.4	155.2	100.6	105.7	103.2	132.6	130.5
1903....	104.7	106.9	105.8	137.3	137.0	137.2	98.7	98.0	98.4	113.8	118.8
1904....	112.0	109.7	110.9	116.8	116.5	116.7	110.3	107.8	109.1	112.2	126.2
1905....	112.2	110.2	111.2	119.9	120.4	120.2	134.5	128.5	131.5	121.0	124.2
1906....	115.2	113.1	114.2	141.3	143.1	142.2	131.7	133.5	132.6	129.7	123.6
1907....	123.0	122.8	122.9	137.8	140.6	139.2	130.3	123.5	126.9	129.7	137.1

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0]

Year.	Food, etc.								
	Beans medium choice.	Bread.							
		Crackers.			Loaf				Average.
		Boston	Soda	Average	Washington market	Home-made (N Y. market)	Vienna (N Y market)	Average	
1890....	121 5	104 0	111 4	107 7	100 6	100 9	101 1	100 9	103 6
1891....	134 9	104 0	111 4	107 7	100 6	100 9	101 1	100 9	103 6
1892....	112 0	102 2	106 3	104 3	100 6	100 9	101 1	100 9	102.2
1893....	119 2	96 6	104 5	100.6	100 6	100 9	101 1	100 9	100 7
1894....	110 6	96 6	101 0	98 8	100 6	100 9	101 1	100 9	100 0
1895....	107 2	97 2	94 0	95 6	94 1	100 9	101 1	98 7	97 5
1896....	70 3	96 6	91 6	94 1	102 5	90 5	90 6	94 5	94 4
1897....	62 6	88 0	82 5	85 3	100 6	100 9	101 1	100 9	94 6
1898....	74 7	108 9	105 6	107 3	100 6	100 9	101 1	100 9	103.4
1899....	87 0	105 9	92 3	99 1	100 6	100 9	101 1	100 9	100 2
1900....	125 6	111 4	94 0	102 7	100 6	100 9	101 1	100 9	101 6
1901....	131 3	118 9	97 5	108 2	100 6	100 9	101 1	100 9	103 8
1902....	115 0	118 9	97 5	108 2	100 6	100 9	101 1	100 9	103 8
1903....	135 5	112 6	90 0	101 3	100 6	100 9	101 1	100 9	101 [illegible]
1904....	120 4	115 2	91 6	103 4	102 5	110 4	105 1	106 0	105 0
1905....	128 8	132 5	95 1	113 8	100 6	118 6	113 6	110 9	112 1
1906....	113 8	133 7	90 5	112 1	100 6	118 6	113 6	110 9	111 4
1907....	106 4	133 7	90 5	112 1	100 6	118 6	113 6	110 9	111.4

Year.	Butter				Cheese New York, full cream	Coffee Rio No 7	Eggs new-laid, fancy, near-by.	Fish.				
	Creamery, Elgin (Elgin market).	Creamery, extra (New York market).	Dairy, New York State	Average				Cod, dry, bank, large.	Herring, shore, round	Mackerel, salt, large No 3s	Salmon, canned	Average.
1890....	103 1	101 5	96 5	100 4	97 1	136.6	99 1	101 7	93 3	129 2	111 4	108 9
1891....	115 3	115 3	117 6	116 1	102 4	127 3	110 0	120.5	124 6	108 4	101.8	113 8
1892....	116 5	116 5	116 1	116 4	107.2	108 9	110 4	126 3	77 8	92 0	100.7	99.2
1893....	118 9	120 5	124 6	121 3	109.0	131 2	114 5	114.2	101 0	92 0	101.4	102.2
1894....	101 1	102 1	103 3	102 2	107 4	126 0	93 5	106 7	89 9	78 2	96 7	92.9
1895....	95 1	95 3	93 0	94 5	94 1	121 2	102 0	98 9	83 6	110 6	102 1	98.8
1896....	82 6	82 1	82 3	82 3	92 0	93 9	88.7	75 4	88 8	98 5	105 2	92 0
1897....	84 7	84 5	83 2	84 1	98 1	60 4	87 5	80 9	96 3	86 5	90 8	88.6
1898....	86 9	87 2	86 4	86 8	83 3	48 2	92 6	83 6	111 4	96 7	86 0	94.4
1899....	95.6	94 8	97.1	95 8	108 9	46 0	101 6	92 0	133 2	107.9	103.8	109 2
1900....	100 4	100 1	104 5	101 7	114 3	62 6	100 7	94 9	134 6	98 3	120 2	112 0
1901....	97 4	96 5	99 2	97 7	102 4	49 2	106 7	107 2	131 9	76.6	116 3	108.0
1902....	111 2	110 6	114 5	112 1	114 1	44 6	122 7	91 2	129 9	97 3	109.6	107.0
1903....	106 1	104 7	106 2	105 7	123.3	42 6	123 2	105 0	151 7	123 5	110.0	122.6
1904....	100 4	97 6	97 3	98 4	103 2	59.6	135 0	130 4	144.4	102 6	117 1	123 6
1905....	111 9	111 0	115 6	112 8	122 8	63 4	138 2	132 4	158 9	98 5	115.7	126.4
1906....	113 3	111 0	114 9	113 1	133 0	61 8	133 2	136.2	168 0	104 7	114.3	130.8
1907....	127.2	126 2	132.0	128 5	143 3	50 1	141 2	138 6	162 9	98.5	113 2	128.3

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Food, etc.								
	Flour.						Fruit.		
	Buckwheat.	Rye.	Wheat			Average	Apples		
			Spring patents.	Winter straights.	Average		Evaporated, choice.	Sun-dried.	Average.
1890....	104.0	101.4	120.7	121.0	120.9	111.8	134.1	134.0	134.1
1891....	125.7	148.3	123.5	127.6	125.6	131.3	129.9	160.2	145.1
1892....	92.1	121.1	101.1	107.2	104.2	105.4	81.2	82.1	81.7
1893....	121.9	93.0	93.2	85.4	89.3	98.4	109.4	98.6	104.0
1894....	125.4	83.8	83.7	71.5	77.6	91.1	128.9	122.5	125.7
1895....	86.2	94.5	84.8	84.0	84.4	87.4	80.0	93.4	86.7
1896....	71.1	80.9	88.3	94.1	91.2	83.6	62.9	60.6	61.8
1897....	75.4	84.6	106.8	113.4	110.1	95.1	65.5	51.8	58.7
1898....	79.8	92.9	110.1	107.8	109.0	97.7	105.1	77.3	91.2
1899....	118.4	99.4	87.8	88.0	87.9	98.4	102.6	118.4	110.5
1900....	108.3	103.3	89.4	87.1	88.3	97.0	72.6	86.0	79.3
1901....	108.4	100.1	88.7	86.0	87.4	95.8	83.7	79.6	81.7
1902....	115.1	103.9	88.6	90.7	89.7	99.6	108.7	98.4	103.6
1903....	119.5	94.9	100.8	93.4	97.1	102.2	72.1	83.9	78.0
1904....	120.1	131.1	125.2	125.5	125.4	125.5	71.2	64.7	68.0
1905....	112.7	134.7	126.2	118.1	122.2	122.9	82.5	67.6	75.1
1906....	115.0	115.9	99.5	94.0	96.8	106.1	115.5	103.3	109.4
1907....	132.4	138.7	113.5	103.7	108.6	122.1	99.5	123.9	111.7

Year	Fruit				Glucose (a)	Lard prime contract	Meal corn		
	Currants, in barrels	Prunes, California, in boxes	Raisins, California, London layer	Average			Fine white	Fine yellow.	Average.
1890....	127.5	138.0	157.3	138.2	....	96.8	101.2	100.3	100.8
1891....	113.6	129.2	120.1	130.6	....	100.9	140.6	143.4	142.0
1892....	79.2	128.6	97.9	93.8	....	117.9	113.7	114.2	114.0
1893....	72.0	134.2	113.3	105.5	124.3	157.5	105.0	106.5	105.8
1894....	46.1	95.0	76.9	93.9	111.4	118.2	106.7	104.5	105.6
1895....	67.7	86.0	95.2	84.5	109.2	99.8	102.2	104.4	103.3
1896....	87.2	75.1	67.9	70.7	81.7	71.7	77.5	77.2	77.4
1897....	127.7	70.5	93.2	81.7	86.0	67.4	77.8	75.1	76.5
1898....	154.7	70.3	92.7	100.0	91.8	84.4	84.1	83.2	83.7
1899....	125.3	73.0	85.5	101.0	95.6	85.0	91.1	91.2	91.2
1900....	192.0	67.4	101.3	103.9	104.9	105.5	96.5	97.4	97.0
1901....	221.6	67.8	96.1	109.8	116.0	135.3	114.2	116.8	115.5
1902....	131.7	71.2	112.3	104.5	153.6	161.9	146.4	150.0	148.2
1903....	126.9	62.1	96.3	88.3	129.7	134.1	123.7	125.7	124.7
1904....	130.1	59.6	98.2	96.0	126.3	111.8	127.8	131.1	129.5
1905....	130.7	59.3	79.1	83.8	125.1	113.9	126.4	130.3	128.4
1906....	163.7	83.5	106.6	117.9	142.9	135.6	120.8	124.2	122.5
1907....	187.5	76.6	108.4	119.2	159.4	140.7	129.5	133.5	131.5

[a] Average for 1893-1899=100.0.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Food, etc.											
	Meat.											
	Beef				Pork.							
	Fresh, native sides.	Salt, extra mess.	Salt, hams, western	Average.	Bacon, short clear sides.	Bacon, short rib sides.	Hams, smoked.	Salt, mess, old to new	Average.	Mutton, dressed.	Average.
1890....	89.2	86.8	80.4	85.5	89.3	89.3	101.1	104.4	96.0	123.7	95.5
1891....	106.2	104.4	85.8	98.8	103.6	103.8	99.8	97.2	101.1	114.9	102.0
1892....	98.8	84.4	80.5	88.0	116.6	116.5	109.3	99.1	110.4	121.2	103.4
1893....	105.4	102.2	98.6	102.1	155.3	154.0	126.9	157.6	148.5	106.5	125.8
1894....	97.0	101.0	101.5	99.8	111.3	112.2	103.6	121.4	112.1	80.2	103.5
1895....	102.7	101.4	95.9	100.0	96.3	96.3	96.2	101.7	97.6	82.2	96.6
1896....	90.5	93.7	88.1	90.8	73.2	73.0	95.8	76.8	79.7	82.9	84.3
1897....	99.7	95.7	125.1	106.8	80.1	79.6	90.9	76.6	81.8	96.6	93.0
1898....	101.3	114.2	118.8	111.4	88.3	90.5	82.0	84.8	86.4	98.0	97.2
1899....	108.3	115.9	125.6	116.6	86.4	85.1	93.8	80.3	86.4	94.3	98.7
1900....	104.3	121.7	114.2	113.4	111.4	111.6	104.2	107.5	108.7	96.4	108.9
1901....	102.1	116.3	112.6	110.3	132.0	132.5	109.2	134.2	127.0	89.5	116.1
1902....	125.9	147.1	118.0	130.3	159.0	159.5	123.1	154.2	149.0	97.9	135.6
1903....	101.7	113.1	117.2	110.7	142.1	143.0	129.2	143.1	139.4	98.7	123.5
1904....	106.1	109.4	123.5	113.0	114.8	115.4	108.9	120.6	114.9	103.2	112.7
1905....	104.0	125.0	121.6	116.9	118.5	119.4	106.3	123.9	117.0	113.9	116.6
1906....	101.2	110.3	119.2	110.2	139.6	140.2	125.5	150.5	139.0	120.7	125.9
1907....	114.7	122.5	141.0	127.1	141.3	140.1	132.4	151.0	141.2	116.0	132.8

Year.	Milk fresh	Molasses New Orleans, open kettle.	Rice domestic, choice	Salt			Soda bicarbonate of, American.	Spices			Starch: pure corn.
				American.	Ashton's.	Average.		Nutmegs.	Pepper, Singapore.	Average.	
1890....	103.1	112.4	107.8	112.5	111.9	112.2	131.6	146.2	153.7	150.0	99.6
1891....	104.7	88.5	113.5	111.7	108.1	109.9	151.7	140.7	116.6	128.7	109.5
1892....	105.1	101.2	101.4	107.5	107.8	107.7	104.3	123.1	92.0	107.6	109.5
1893....	109.4	106.2	81.8	99.6	105.5	102.6	136.4	106.1	79.4	92.8	109.5
1894....	103.1	98.1	93.8	102.1	101.6	101.9	128.2	92.5	68.9	80.7	103.5
1895....	99.2	97.8	95.0	99.6	93.0	96.3	84.7	91.8	66.4	79.1	101.1
1896....	91.8	103.0	92.5	88.4	93.0	90.7	72.7	83.1	66.8	75.0	93.6
1897....	92.2	83.1	96.6	93.9	93.0	93.5	71.8	77.6	88.7	83.2	91.2
1898....	93.7	97.8	108.4	94.4	93.0	93.7	61.7	72.7	119.0	95.9	91.2
1899....	99.2	111.9	108.2	90.4	93.0	91.7	56.0	66.4	149.1	107.8	91.2
1900....	107.5	151.5	97.7	142.1	93.0	117.6	58.9	60.2	172.4	116.3	91.2
1901....	102.7	120.1	97.7	121.6	99.0	110.3	51.2	54.3	172.5	113.4	85.8
1902....	112.9	115.5	99.6	90.3	101.0	95.7	51.7	46.9	167.6	107.3	80.3
1903....	112.9	112.5	100.9	87.2	102.0	94.6	61.7	66.6	172.1	119.4	92.5
1904....	107.8	107.8	78.6	109.4	(a)	109.4	62.2	50.3	164.1	107.2	95.8
1905....	113.3	102.5	74.3	107.2	(a)	107.2	62.2	39.8	162.5	101.2	100.7
1906....	118.0	107.9	84.5	101.4	(a)	101.4	62.2	40.0	151.9	96.0	105.3
1907....	131.4	129.7	95.2	112.6	(a)	112.6	62.2	32.3	132.7	82.5	109.5

[a] Quotations discontinued.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890–1899=100.0.]

Year	Food, etc.										
	Sugar				Tallow	Tea Formosa, fine	Vegetables, fresh.			Vinegar cider, Monarch.	Average, food, etc.
	89° fair refining	96° centrifugal.	Granulated	Average			Onions	Potatoes, white	Average		
1890....	143.9	141.1	130.5	138.5	105.7	96.3	127.8	119.3	123.6	105.4	112.4
1891....	101.8	101.1	99.7	100.9	111.0	99.2	121.3	154.9	138.1	121.8	115.7
1892....	84.5	85.7	92.1	87.4	106.4	106.0	106.0	91.1	98.6	111.1	103.6
1893....	94.3	95.1	102.3	97.2	125.1	101.7	93.8	134.5	114.2	101.5	110.2
1894....	81.2	83.5	87.0	83.9	110.3	98.0	95.6	122.8	109.2	101.5	99.8
1895....	85.2	84.1	87.9	85.7	99.8	95.1	91.6	86.7	89.2	98.1	94.6
1896....	93.9	93.7	95.9	94.5	78.9	91.0	57.3	39.4	48.4	88.0	83.8
1897....	90.6	92.1	95.1	92.6	76.3	98.6	115.5	65.7	90.6	88.0	87.7
1898....	109.2	109.5	105.2	108.0	81.8	104.2	96.2	102.1	99.2	89.6	94.4
1899....	115.4	114.3	104.2	111.3	104.1	109.8	94.8	83.6	89.2	94.7	98.3
1900....	119.2	118.2	112.8	116.7	111.5	104.9	71.4	74.9	73.2	91.3	104.2
1901....	103.6	104.4	106.8	104.9	119.1	100.4	103.0	113.0	108.0	89.6	105.9
1902....	89.3	91.5	94.2	91.7	144.6	106.2	107.2	119.4	113.3	95.3	111.3
1903....	95.0	96.1	98.2	96.4	117.2	80.9	104.9	105.2	105.1	88.0	107.1
1904....	102.1	102.7	101.0	101.9	105.5	97.1	104.6	146.3	125.5	89.6	107.2
1905....	108.8	110.6	111.2	110.2	103.2	94.2	95.3	80.7	88.0	98.6	108.7
1906....	93.7	95.3	95.5	94.8	119.3	82.8	96.8	109.7	103.3	115.0	112.6
1907....	95.7	97.0	98.4	97.0	142.8	81.0	103.0	98.4	100.7	116.7	117.8

Year.	Cloths and clothing										
	Bags: 2-bu., Amoskeag.	Blankets				Boots and shoes.					Average.
		11-4, all wool	11-4, cotton warp, all wool filling	11-4, cotton warp, cotton and wool filling	Average.	Men's brogans, split	Men's calf bal shoes, Goodyear welt.	Men's split boots	Men's vici kid shoes, Goodyear welt.	Women's solid grain shoes.	
1890....	113.9	108.3	106.0	108.5	107.6	106.1	101.0	104.0	108.7	104.0	104.8
1891....	111.7	106.0	106.0	108.5	106.8	106.1	101.0	104.0	108.7	97.9	103.5
1892....	110.8	107.1	104.4	101.4	104.3	104.9	101.0	104.0	108.7	94.8	102.7
1893....	106.8	107.1	104.4	99.1	103.5	102.3	101.0	100.9	108.7	91.7	100.9
1894....	91.1	101.2	89.7	96.7	95.9	97.9	101.0	97.9	108.7	91.7	99.4
1895....	82.2	89.3	88.1	94.3	90.6	99.2	101.0	91.7	97.8	104.0	98.7
1896....	91.6	89.3	91.4	94.3	91.7	100.4	101.0	94.8	97.8	104.0	99.6
1897....	92.9	89.3	106.0	99.1	98.1	96.0	101.0	97.9	87.0	104.0	97.2
1898....	95.6	107.1	102.0	99.1	102.7	92.2	97.6	100.9	87.0	104.0	96.3
1899....	103.4	95.2	102.0	99.1	98.8	94.8	94.3	104.0	87.0	104.0	96.8
1900....	112.6	107.1	122.3	123.8	117.7	94.8	94.3	110.1	87.0	110.6	99.4
1901....	101.0	101.2	106.0	112.0	106.4	95.4	96.8	112.4	87.0	104.5	99.2
1902....	102.4	101.2	106.0	112.0	106.4	94.1	96.8	111.1	87.0	105.5	98.9
1903....	104.2	110.1	114.2	117.9	114.1	93.5	98.9	113.1	87.0	108.6	100.2
1904....	128.4	110.1	118.3	123.8	117.4	93.5	98.9	113.7	87.3	112.3	101.1
1905....	109.6	119.0	126.4	141.5	129.0	101.5	100.0	120.5	95.5	119.5	107.4
1906....	129.1	122.0	130.5	141.5	131.3	126.8	[a] 108.0	144.8	103.4	126.2	121.8
1907....	138.5	119.0	130.5	141.5	130.3	128.7	[a] 109.0	160.0	108.7	123.1	125.9

[a] Men's vici calf shoes, Blucher bal., vici calf top, single sole. For method of computing relative price, see pages 327 and 328.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0]

Year.	Cloths and clothing.								
			Carpets				Cotton flannels.		
	Broadcloths first quality, black, 54-inch, XXX wool.	Calico: Cocheco prints.	Brussels, 5-frame, Bigelow	Ingrain, 2-ply, Lowell.	Wilton, 5-frame, Bigelow.	Average	2¾ yards to the pound	3½ yards to the pound.	**Average.**
1890....	113.7	117.5	103.1	108.6	104.2	105.3	123.9	119.7	**121.8**
1891....	113.7	104.0	112.7	116.2	109.4	112.8	123.9	119.7	**121.8**
1892....	113.7	117.5	103.1	106.1	101.2	104.5	118.7	113.0	**115.9**
1893....	113.7	113.0	98.3	111.1	104.2	104.5	102.7	100.0	**101.4**
1894....	91.2	99.5	93.5	98.5	104.2	98.7	95.6	95.7	**95.7**
1895....	79.7	94.9	93.5	88.4	91.1	91.0	92.1	91.3	**91.7**
1896....	79.7	94.9	93.5	85.9	91.1	90.2	92.1	95.7	**93.9**
1897....	98.2	90.4	95.9	90.9	93.8	93.5	81.4	95.7	**88.6**
1898....	98.2	81.4	103.1	98.5	99.0	100.2	81.4	80.5	**81.0**
1899....	98.2	87.3	103.1	96.0	99.0	99.4	87.7	88.3	**88.0**
1900....	108.0	94.9	103.1	103.5	101.6	102.7	104.5	98.6	**101.6**
1901....	110.3	90.4	103.1	101.0	101.6	101.9	90.7	100.0	**95.4**
1902....	110.3	90.4	103.5	101.9	102.2	102.5	92.1	100.0	**96.1**
1903....	110.3	91.1	108.7	108.1	108.9	108.6	104.1	109.4	**106.8**
1904....	110.5	95.7	110.3	109.1	110.7	110.0	125.4	125.7	**125.6**
1905....	115.2	93.5	115.1	116.2	115.9	115.7	121.0	118.4	**119.7**
1906....	116.6	99.5	117.9	116.2	118.9	117.7	130.7	125.7	**128.2**
1907....	116.6	[a] 121.0	124.7	121.2	123.7	123.2	139.9	139.1	**139.5**

Year.	Cotton thread 6-cord, 200-yard spools, J & P. Coats	Cotton yarns			Denims Amoskeag.	Drillings			**Flannels: white, 4-4. Ballard Vale No. 3.**
		Carded, white, mule-spun, northern, cones, 10/1	Carded, white, mule-spun, northern, cones, 22/1	Average		Brown, Pepperell.	30-inch, Stark A.	Average.	
1890....	101.6	111.3	112.1	111.7	112.5	119.4	122.8	121.1	**116.8**
1891....	100.7	111.6	114.0	112.8	109.6	114.0	115.2	114.6	**116.8**
1892....	100.7	117.2	116.8	117.0	109.6	101.7	102.7	102.2	**115.9**
1893....	100.7	112.4	108.6	110.5	112.5	103.1	108.1	105.6	**109.5**
1894....	100.7	94.7	91.2	93.0	105.4	97.7	96.4	97.1	**94.1**
1895....	100.7	91.9	92.2	92.1	94.6	92.5	93.9	93.2	**81.7**
1896....	99.6	92.2	93.7	93.0	94.6	100.2	100.2	100.2	**85.4**
1897....	98.4	90.3	90.8	90.6	89.2	91.8	88.9	90.4	**82.6**
1898....	98.4	90.5	91.0	90.8	85.9	89.7	83.9	86.8	**97.8**
1899....	98.4	87.6	89.4	88.5	85.8	89.2	87.7	88.5	**99.5**
1900....	120.1	115.0	115.9	115.5	102.8	105.9	104.0	105.0	**108.7**
1901....	120.1	98.6	97.9	98.3	100.2	102.3	102.1	102.2	**100.8**
1902....	120.1	95.6	92.4	94.0	100.6	100.5	103.5	102.0	**105.8**
1903....	120.1	116.2	109.5	112.9	108.0	108.2	111.5	109.9	**114.3**
1904....	120.1	123.2	115.7	119.5	116.6	127.1	126.3	126.7	**117.6**
1905....	120.1	107.8	103.5	105.7	103.7	126.0	121.5	123.8	**118.4**
1906....	120.1	124.6	117.0	120.8	118.1	135.5	142.0	138.8	**122.4**
1907....	134.8	137.1	130.6	133.9	132.3	144.2	150.1	147.2	**123.1**

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[a] Calico: American standard prints, 64 x 64. For method of computing relative price, see pages 327 and 328.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Cloths and clothing.								
	Ginghams.			Horse blankets 6 pounds each, all wool.	Hosiery.				
	Amoskeag.	Lancaster.	Average.		Men's cotton half hose, seamless, fast black, 20 to 22 oz.	Men's cotton half hose, seamless, 84 needles	Women's combed Egyptian cotton hose, high spliced heel ([a])	Women's cotton hose, seamless, fast black, 26 to 28 oz.	Average.
1890....	117.3	120.8	119.1	109.1	133.3	124.3	....	131.6	129.7
1891....	122.0	122.2	122.1	104.7	123.1	124.3	....	121.1	122.8
1892....	122.0	122.2	122.1	109.1	112.8	123.6	....	115.8	117.4
1893....	118.4	111.3	114.9	104.7	110.3	111.5	102.7	113.2	109.4
1894....	91.0	88.0	89.5	96.0	102.6	92.4	102.7	105.3	100.8
1895....	87.4	86.6	87.0	92.5	94.9	89.2	101.4	92.1	94.4
1896....	88.6	87.3	88.0	90.8	87.2	89.2	101.4	84.2	90.5
1897....	82.2	86.2	84.2	99.5	82.1	82.9	100.0	81.6	86.7
1898....	80.9	85.2	83.1	99.5	76.9	82.9	97.3	76.3	83.4
1899....	89.5	89.9	89.7	94.2	76.9	79.7	94.6	78.9	82.5
1900....	96.6	96.0	96.3	118.7	82.1	82.9	102.7	81.6	87.3
1901....	91.9	92.7	92.3	109.9	71.8	92.4	108.1	71.1	85.9
1902....	98.1	100.3	99.2	109.9	76.9	85.0	100.0	78.9	85.2
1903....	103.2	100.3	101.8	117.8	82.1	90.0	101.4	86.8	90.1
1904....	102.8	97.0	99.9	122.2	82.1	95.9	97.3	81.6	89.2
1905....	96.6	90.2	93.4	130.9	82.1	89.2	94.6	84.2	87.5
1906....	106.0	103.3	104.7	135.3	85.3	89.2	102.7	81.6	89.7
1907....	123.5	120.4	122.0	130.9	94.8	95.6	109.5	89.5	97.4

Year.	Leather.					Linen thread.		
	Harness, oak.	Sole, hemlock	Sole, oak.	Wax calf, 30 to 40 lbs to the dozen, B grade.	Average.	Shoe, 10s, Barbour.	3-cord, 200-yard spools, Barbour.	Average.
1890....	99.3	99.1	112.1	91.7	100.6	101.9	104.6	103.3
1891....	99.6	95.8	109.4	98.8	100.9	101.9	93.2	97.6
1892....	91.4	89.1	101.7	105.9	97.0	101.9	94.1	98.0
1893....	92.7	92.6	103.6	98.5	96.9	102.8	97.5	100.2
1894....	87.8	88.4	97.5	92.3	91.5	105.0	99.9	102.5
1895....	111.5	106.9	101.7	112.0	108.0	97.3	99.9	98.6
1896....	98.6	97.0	87.0	98.3	95.2	97.3	99.9	98.6
1897....	93.9	104.8	91.6	94.1	96.1	97.3	101.8	99.6
1898....	109.1	109.8	95.5	103.3	104.4	97.3	104.6	101.0
1899....	116.0	116.2	99.9	105.0	109.3	97.3	104.6	101.0
1900....	116.8	128.4	107.3	100.3	113.2	101.5	104.6	103.1
1901....	114.7	127.6	104.8	96.0	110.8	101.9	104.6	103.3
1902....	114.7	122.1	113.0	100.9	112.7	101.9	104.6	103.3
1903....	111.3	116.9	111.3	105.4	112.0	96.7	98.2	97.5
1904....	110.0	116.5	102.6	105.0	108.5	97.2	103.7	100.5
1905....	115.0	118.1	108.9	106.5	112.1	97.2	103.7	100.5
1906....	128.1	130.9	112.9	109.5	120.4	102.1	103.7	102.9
1907....	129.0	136.4	113.6	117.1	124.0	102.1	107.3	104.7

[a] Average for 1893-1899=100.0.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0]

Year.	Cloths and clothing.							
	Overcoatings						Print cloths. 28-inch, 64 x 64.	Shawls: standard, all wool, 72 x 144 in., 42-oz.
	Beaver, Moscow, all wool, black.	Chinchilla, B-rough, all wool.	Chinchilla, cotton warp, C.C. grade	Covert cloth, light weight, staple.	Kersey, standard, 27 to 28 oz (a)	Average		
1890...	116 7	113 4	109 1	105 7	....	111 2	117 7	107.0
1891...	116 7	113 4	107 7	105 7	....	110 9	103 5	107 0
1892..	116 7	113 4	109 1	105 7	....	111 2	119 3	107 0
1893 .	111 7	108 5	109 9	105 7	....	109 0	114 6	107.0
1894 ..	95 5	92 8	96 9	104 2	....	97 4	96.8	107.0
1895...	84 9	87 7	92 3	99 9	....	91 2	100.9	107.0
1896....	84 9	87 7	89 2	87 4	....	87 3	93 9	89.1
1897..	84 9	87 7	93 7	83 6	94 9	89 0	87 6	89.5
1898	89 4	97 7	98.3	97 2	104 2	97 4	72 6	90.2
1899....	98 7	97 7	93 9	104 9	100 9	99 2	96 3	89.1
1900....	120 1	116 7	100 2	101 4	126 3	112 9	108 6	107.0
1901....	106 1	97 7	90 8	97 2	120 3	102 4	99 3	107 0
1902....	106 1	97 7	92 3	97 2	120 3	102 7	108 9	107.0
1903 ...	117 3	103 1	92 8	94 0	126 3	106 7	113 3	107.0
1904....	111 7	103 1	93 3	94 0	132 3	106 9	117 3	107.0
1905 ..	117 3	111 8	94 0	96 [illegible]	146 8	113 4	110 0	117 5
1906 .	(b)	117 8	101 6	96 9	163 7	120 0	127 7	128.5
1907	(b)	119 4	100 5	96 9	158 0	118 7	167 4	107.0

Year.	Sheetings.									
	Bleached.				Brown.					Average.
	10-4, Atlantic	10-4, Pepperell.	10-4, Wamsutta S T.	Average.	4-4, Atlantic A	4-4, Indian Head.	4-4, Pepperell R.	4-4, Stark A. A.	Average.	
1890 ...	122 1	116 2	106 0	114 8	121 0	115 8	116 2	125 7	119 7	117.6
1891 ...	116 4	106 6	107 2	110 1	118 1	116 1	108 3	113 1	113 9	112.3
1892 .	108 7	100 8	99 8	103 1	106 7	103 5	103 3	103 8	104 3	103.8
1893 .	111 8	103 3	103 6	106 2	111 9	108 5	105 8	109 3	108 9	107.7
1894	94 8	92 5	93 5	93 6	99 3	95 5	96 4	99 2	97 6	95.9
1895	93 8	94 7	92 2	93 6	94 0	93 5	96 0	97 7	95 3	94 6
1896 . .	92 6	95 1	99 2	95 6	96 7	99 4	101 3	97 3	98 7	97.4
1897....	87 4	92 3	99 2	93 0	88 6	93.9	95 3	86 1	91 0	91 8
1898....	83 2	91 3	99 2	91 2	80 1	86 3	86 2	80 8	83 4	86.7
1899 ..	89 4	107 3	100 1	98 9	84 3	86 9	91 5	85 9	87 2	92.2
1900 ...	111.3	121 7	104 3	112 4	100 4	99 5	107 4	96 8	101 0	105.9
1901.. .	100.9	112.4	99 2	104 2	98 0	100.8	107 4	94 1	100 1	101 8
1902....	104.4	111.5	99 2	105 0	99.3	99.8	103 3	c92 6	98 8	101.4
1903....	115.7	120 8	103 0	113 2	115 0	108 8	108 7	c101 9	108 6	110.6
1904 ...	128 3	128.7	94 1	117 0	129 8	128 1	121 4	c117 0	124 1	121.1
1905....	110 2	120.3	91 6	107.4	115 6	121.1	116 9	c118 6	118 1	113.5
1906....	d121.5	131 4	92 7	115 2	133 6	128 1	124 3	c125 5	127 9	122.4
1907....	d134 3	153.0	103 4	130 2	138 9	133 4	135 4	c127.1	133.7	132.2

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[a] Average for 1897-1899=100.0

[b] Quotations discontinued.

[c] Sheetings: brown, 4-4, Massachusetts Mills, Flying Horse brand. For method of computing relative price, see pages 327 and 328

[d] Sheetings: bleached, 9-4, Atlantic. For method of computing relative price, see pages 327 and 328.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Cloths and clothing.								
	Shirtings: bleached.						Silk, raw.		
	4-4, Fruit of the Loom	4-4, Hope	4-4, Lonsdale	4-4, New York Mills.	4-4, Wamsutta O. X X	Average	Italian, classical.	Japan, filatures.	Average.
1890....	116.1	115.2	116.2	110.5	106.6	112.9	122.7	130.5	126.6
1891....	109.8	111.6	113.1	110.2	106.4	110.2	98.4	99.8	99.1
1892....	111.0	105.2	111.7	106.3	102.6	107.4	105.3	107.7	106.5
1893....	114.3	113.2	114.4	105.6	103.5	110.2	118.2	113.0	115.6
1894....	99.9	98.4	100.0	101.0	100.2	99.9	86.5	83.7	85.1
1895....	96.2	96.5	95.9	97.1	102.2	97.6	94.9	94.2	94.6
1896....	95.6	98.4	94.2	101.0	100.3	97.9	85.3	84.8	85.1
1897....	88.0	91.1	87.1	95.4	98.6	92.0	85.5	86.2	85.9
1898....	80.2	82.2	81.8	89.5	85.1	83.8	91.1	90.5	90.8
1899....	88.5	87.5	86.1	82.8	94.1	87.8	112.1	109.7	110.9
1900....	103.4	106.5	100.6	89.7	101.8	100.4	106.0	103.7	104.9
1901....	103.0	111.0	101.5	86.8	92.3	98.9	90.4	87.4	88.9
1902....	103.8	107.3	101.9	87.4	93.4	98.8	96.5	95.1	95.8
1903....	105.4	107.1	103.9	97.0	102.7	103.2	106.3	102.9	104.6
1904....	110.2	111.9	109.5	94.7	97.2	104.7	90.8	90.6	90.7
1905....	102.7	105.2	101.7	96.8	99.4	101.2	96.5	99.3	97.9
1906....	112.2	115.6	110.9	*a* 108.0	109.0	111.1	101.6	103.6	102.6
1907....	153.4	143.7	141.0	*a* 132.8	116.0	137.4	131.1	125.9	128.5

Year	Suitings.							Tickings: Amoskeag A. C. A.
	Clay worsted diagonal, 12-oz., Wash. Mills (*b*)	Clay worsted diagonal, 16-oz., Wash. Mills (*b*)	Indigo blue, all wool, 54-inch, 14-ounce, Middlesex.	Indigo blue, all wool, 16-ounce.	Serge, Washington Mills 6700 (*c*)	Trouserings, fancy worsted (*c*)	Average.	
1890....	....	....	116.9	109.2	....	....	113.1	113.1
1891....	....	....	116.9	109.2	....	....	113.1	110.7
1892....	....	....	116.9	109.2	120.9	106.6	113.4	108.4
1893....	....	....	114.0	109.2	120.9	106.6	112.7	111.3
1894....	....	....	111.1	92.3	90.7	98.9	98.3	102.2
1895....	92.5	93.8	87.1	83.0	90.7	87.9	89.2	94.8
1896....	89.1	87.6	86.0	89.9	81.6	92.3	87.8	96.0
1897....	92.2	93.3	79.1	87.4	87.7	92.3	88.7	91.9
1898....	111.3	111.4	86.0	103.2	99.8	108.9	103.4	84.3
1899....	114.9	113.9	86.0	107.2	107.7	106.6	106.1	87.0
1900....	131.4	133.7	86.0	118.4	107.6	117.6	115.8	102.2
1901....	110.6	111.0	89.6	109.2	106.6	102.2	104.9	95.5
1902....	110.9	108.6	99.2	109.2	105.1	101.8	105.8	99.0
1903....	115.2	112.1	108.8	112.6	100.4	104.6	109.0	104.1
1904....	112.2	109.6	109.1	114.1	102.9	106.2	109.0	114.3
1905....	132.7	129.3	115.6	119.0	128.1	111.6	122.7	102.1
1906....	147.5	146.4	129.3	126.2	138.8	120.6	134.8	119.0
1907....	142.1	139.3	129.3	126.2	139.5	122.3	133.1	129.4

a Williamsville, A1. *b* Average for 1895-1899=100.0. *c* Average for 1892-1899=100.0.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Cloths and clothing.									
	Underwear.			Women's dress goods.						
	Shirts and drawers, white, all wool, etc.	Shirts and drawers, white, merino, 52% wool, etc.	Average.	Alpaca, cotton warp, 22-inch, Hamilton.	Cashmere, all wool, 10-11 twill, 38-in., Atlantic J.	Cashmere, cotton warp, 9 twill, 4 4, Atlantic F.	Cashmere, cotton warp, 22-inch, Hamilton.	Cashmere, cotton warp, 27-inch, Hamilton.	Franklin sackings, 6-4.	Average.
1890....	106.2	106.9	106.6	108.1	119.8	119.3	109.9	111.0	115.3	113.9
1891....	110.0	112.7	111.4	108.1	126.1	119.3	109.9	111.0	119.9	115.7
1892....	110.0	112.7	111.4	106.3	128.2	117.7	108.3	109.6	119.9	115.0
1893....	110.0	112.7	111.4	104.6	111.8	98.4	106.7	106.1	117.6	107.5
1894....	92.7	95.4	94.1	100.9	81.3	88.7	100.3	102.7	96.8	95.6
1895....	92.7	92.5	92.6	93.7	81.0	83.8	97.0	95.8	84.3	89.3
1896....	92.7	92.5	92.6	93.7	67.5	83.6	93.8	93.0	80.7	85.4
1897....	92.7	92.5	92.6	93.7	82.2	90.3	90.5	88.8	82.2	88.0
1898....	92.7	95.4	94.1	93.7	88.6	94.3	90.5	88.8	88.4	90.7
1899....	100.4	86.7	93.6	96.6	110.4	104.8	93.1	93.0	94.9	98.8
1900....	100.4	95.4	97.9	104.6	119.1	108.0	100.3	99.9	118.3	108.4
1901..	100.4	95.4	97.9	104.6	111.3	104.3	100.3	102.7	104.5	104.6
1902....	100.4	95.4	97.9	103.7	111.3	108.0	99.5	102.0	108.3	105.5
1903....	100.4	95.4	97.9	101.5	114.3	110.5	97.8	101.2	114.5	106.6
1904....	100.4	95.4	97.9	112.4	117.7	114.5	106.7	110.5	113.4	112.5
1905....	100.4	95.4	97.9	[a] 114.9	128.4	132.7	[b] 107.7	121.4	131.0	122.7
1906....	115.8	106.0	110.9	[a] 121.6	134.9	141.8	[b] 109.6	[c] 124.6	133.3	127.6
1907....	115.8	106.0	110.9	[a] 124.9	134.9	147.0	[b] 110.1	[c] 127.8	126.8	128.6

Year.	Wool.			Worsted yarns.			Average, cloths and clothing.
	Ohio, fine fleece (X and XX grade), scoured.	Ohio, medium fleece (¼ and ⅜ grade), scoured.	Average.	2-40s, Australian fine.	2-40s, XXX, white, in skeins.	Average.	
1890....	129.5	134.6	132.1	120.4	124.1	122.3	113.5
1891....	124.1	127.5	125.8	121.3	125.4	123.4	111.3
1892....	110.7	115.6	113.2	119.6	114.8	117.2	109.0
1893....	102.0	101.2	101.6	111.4	107.6	109.5	107.2
1894....	80.5	77.6	79.1	91.3	91.2	91.3	96.1
1895....	68.2	71.9	70.1	72.9	75.1	74.0	92.7
1896....	71.3	69.8	70.6	71.2	74.5	72.9	91.3
1897....	89.7	87.6	88.7	83.6	81.3	82.5	91.1
1898....	111.3	105.3	108.3	101.2	99.7	100.5	93.4
1899....	112.8	108.8	110.8	107.1	106.3	106.7	96.7
1900....	119.3	116.0	117.7	118.3	118.5	118.4	106.8
1901....	98.7	94.5	96.6	102.2	102.1	102.2	101.0
1902....	104.4	97.2	100.8	110.3	[d] 113.1	111.7	102.0
1903....	118.5	102.1	110.3	115.6	[d] 120.4	118.0	106.6
1904....	124.2	106.7	115.5	116.6	[d] 116.3	116.5	109.8
1905....	137.4	117.2	127.3	123.0	[d] 126.4	124.7	112.0
1906....	129.9	112.3	121.1	127.0	[d] 130.0	128.5	120.0
1907....	129.9	113.0	121.5	127.3	[d] 128.4	127.9	126.7

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[a] Danish cloth, cotton warp and filling, 22-inch. For method of computing relative price, see pages 327 and 328.

[b] Poplar cloth, cotton warp and filling, 36-inch. For method of computing relative price, see pages 327 and 328.

[c] Cashmere, cotton warp, 36-inch, Hamilton. For method of computing relative price, see pages 327 and 328.

[d] Designated as XXXX.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year	Fuel and lighting										
	Candles adamantine, 6s, 14-oz.	Coal									
		Anthracite.					Bituminous.				Average.
		Broken.	Chestnut.	Egg.	Stove.	Average.	Georges Creek (at mine).	Georges Creek (f. o. b. N. Y. Harbor).	Pittsburg (Youghiogheny).	Average.	
1890	102.3	103.5	93.3	100.6	97.8	98.8	97.1	108.9	103.3	103.1	100.6
1891	102.3	102.3	96.7	104.4	101.6	101.3	106.9	110.5	122.7	113.4	106.4
1892	102.3	107.4	109.7	110.8	109.4	109.3	101.3	106.9	116.5	108.2	108.9
1893	112.9	105.8	115.9	107.2	110.5	109.9	103.6	107.6	117.9	109.7	109.8
1894	110.9	101.5	98.5	94.3	94.9	97.3	92.4	99.8	98.6	96.9	97.1
1895	108.7	97.5	82.0	84.3	82.4	86.8	87.2	102.5	93.3	94.3	90.0
1896	108.7	97.1	98.9	98.8	100.0	98.7	101.3	97.1	89.1	95.8	97.5
1897	95.3	96.4	103.9	105.7	105.8	103.0	93.8	89.0	88.6	90.5	97.6
1898	78.4	95.4	98.8	100.2	100.1	98.6	102.7	79.3	87.9	90.0	94.9
1899	78.4	93.1	101.4	93.8	97.6	96.5	113.9	98.4	82.6	98.3	97.3
1900	135.4	97.1	108.9	99.7	104.0	102.4	135.0	106.0	117.0	119.3	109.7
1901	140.7	105.5	120.4	112.9	113.9	113.2	150.5	106.6	117.0	124.7	118.1
1902	140.7	110.4	124.0	121.5	117.6	118.4	239.1	148.0	122.4	169.8	140.4
1903	127.4	126.2	134.2	134.3	127.1	130.5	269.6	161.8	143.9	191.8	156.7
1904	115.1	126.1	134.2	134.2	127.1	130.4	196.9	116.5	132.5	148.6	138.2
1905	109.7	125.1	134.1	134.3	127.1	130.2	180.0	114.8	124.4	139.7	134.3
1906	98.0	124.8	135.2	135.3	128.1	130.9	171.4	a 113.9	122.7	a 137.0	a 133.5
1907	94.8	124.9	134.1	134.2	127.1	130.1	173.0	118.0	128.1	139.7	134.2

Year	Coke Connellsville, furnace.	Matches parlor, domestic.	Petroleum					Average, fuel and lighting.
			Crude.	Refined.			Average.	
				For export.	150° fire test, w. w.	Average.		
1890	122.7	111.5	95.4	112.9	111.8	112.4	106.7	104.7
1891	110.4	99.6	73.6	105.5	98.8	102.2	92.6	102.7
1892	106.5	99.6	61.1	93.8	89.2	81.4	91.5	101.1
1893	87.1	99.6	70.3	80.4	81.5	81.0	77.4	100.0
1894	62.3	94.9	92.2	79.4	81.5	80.5	84.4	92.4
1895	78.0	96.1	149.2	109.6	103.6	106.6	120.8	98.1
1896	110.4	99.6	129.5	108.2	116.7	112.5	118.1	104.3
1897	95.2	99.6	86.5	92.0	101.1	96.6	93.2	96.4
1898	98.8	99.6	100.2	96.8	102.1	99.5	99.7	95.4
1899	128.7	99.6	142.1	121.9	114.0	118.0	126.0	105.0
1900	155.8	99.6	148.5	131.6	133.5	132.6	137.9	120.9
1901	115.6	99.6	132.9	115.4	123.1	119.3	123.8	119.5
1902	158.2	90.1	135.9	113.1	124.5	118.8	124.5	134.3
1903	171.5	85.4	174.5	132.5	153.1	142.8	153.4	149.3
1904	96.4	85.4	178.8	127.3	153.6	140.5	153.2	132.6
1905	134.7	85.4	152.1	111.2	141.9	126.6	135.1	128.8
1906	157.5	85.4	175.5	117.4	146.1	131.8	146.3	a 131.9
1907	166.3	85.4	190.5	127.0	151.2	139.1	156.2	135.0

[a] These figures are correct; those for 1906 in Bulletin No. 69 were slightly in error.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Metals and implements.											
	Bar iron.			Barb wire galvanized.	Builders' hardware.				Copper.			
	From mill (Pittsburg market).	From store (Phila. market).	Average.		Butts, loose joint, cast, 3 x 3 in.	Door-knobs, steel, bronze plated.	Locks, common mortise.	Average.	Ingot, lake.	Sheet, hot-rolled (base sizes).	Wire, bare.	Average.
1890....	126.9	125.0	126.0	141.2	111.7	97.8	101.6	103.7	127.6	137.1	128.1	130.9
1891....	117.9	115.9	116.9	127.4	111.7	97.8	101.6	103.7	105.8	114.5	112.7	111.0
1892....	113.1	114.0	113.6	109.5	96.8	97.8	101.6	98.7	93.5	96.4	98.2	96.0
1893....	103.4	103.7	103.6	99.7	98.4	97.8	101.6	99.3	88.6	90.4	92.2	90.4
1894....	82.8	81.7	82.3	86.1	95.9	97.8	100.1	97.9	76.8	85.9	79.0	80.6
1895....	86.2	87.8	87.0	88.9	100.3	115.1	102.0	105.8	87.1	85.9	84.6	85.9
1896....	84.1	85.4	84.8	77.7	104.1	102.1	106.1	104.1	88.9	85.9	92.6	89.1
1897....	75.9	79.9	77.9	71.3	96.8	97.8	102.0	98.9	91.7	88.2	93.9	91.3
1898....	73.8	78.0	75.9	72.7	92.4	97.8	91.8	94.0	96.8	84.4	93.9	91.7
1899....	134.5	126.2	130.4	125.5	92.4	97.8	91.8	94.0	143.2	131.1	124.7	133.0
1900....	148.3	119.5	133.9	134.4	126.6	106.8	96.5	110.0	134.6	124.6	123.0	127.4
1901....	124.1	112.2	118.2	120.2	116.8	112.0	91.8	106.9	136.7	125.9	124.0	128.9
1902....	133.8	129.9	131.9	116.9	126.6	126.9	104.0	119.2	97.3	107.5	90.6	98.5
1903....	122.1	122.0	122.1	108.4	126.6	132.6	110.2	123.1	110.9	115.6	102.3	109.6
1904....	102.1	104.9	103.5	99.3	126.6	144.8	125.5	132.3	106.2	108.5	98.2	104.3
1905....	129.0	117.1	123.1	94.3	126.6	213.6	183.1	174.4	127.7	120.1	116.3	121.4
1906....	126.8	120.7	123.8	96.1	126.6	259.8	221.3	202.6	158.9	143.2	144.0	148.7
1907....	131.3	128.7	130.0	104.3	126.6	265.2	244.8	212.2	172.2	168.3	164.1	168.2

Year.	Metals and implements.									
	Lead, pig.	Lead pipe.	Nails.			Pig iron.				
			Cut, 8-penny, fence and common.	Wire, 8-penny, fence and common.	Average.	Bessemer.	Foundry No. 1.	Foundry No. 2.	Gray forge, southern, coke.	Average.
1890....	115.5	112.1	125.2	137.1	131.2	137.0	124.3	131.4	130.8	130.9
1891....	114.7	116.2	100.3	114.1	107.2	115.8	118.4	117.9	112.9	116.3
1892....	108.4	107.6	96.2	101.3	98.8	101.3	106.4	105.5	106.3	105.6
1893....	98.2	103.8	92.0	92.1	92.1	93.4	98.1	95.3	95.9	95.7
1894....	86.9	92.0	83.6	76.4	80.0	82.6	85.5	83.1	80.6	83.0
1895....	85.6	87.2	105.3	98.0	101.7	92.3	88.5	89.4	93.1	90.8
1896....	78.7	85.1	148.4	135.3	141.9	88.1	87.5	90.2	86.6	88.1
1897....	94.0	89.6	72.9	68.7	70.8	73.5	81.7	77.4	79.4	78.0
1898....	99.7	95.5	65.3	66.5	65.9	75.0	78.8	76.8	78.6	77.3
1899....	117.6	111.0	110.8	110.4	110.6	138.1	130.8	132.9	135.8	134.4
1900....	116.8	106.3	123.1	121.8	122.5	141.5	135.0	141.8	140.7	139.8
1901....	115.0	104.8	115.6	109.4	112.5	115.7	107.2	112.8	113.2	112.2
1902....	107.9	108.3	116.7	97.3	107.0	150.0	149.9	162.7	158.8	155.4
1903....	112.3	107.8	120.2	96.0	108.1	137.7	134.5	146.6	146.4	141.3
1904....	116.3	99.5	99.5	88.2	93.9	99.8	105.2	104.4	105.3	103.7
1905....	125.7	108.4	99.9	87.7	98.8	118.7	120.8	125.7	130.7	124.0
1906....	154.3	133.3	105.7	90.6	98.2	141.8	141.7	147.6	149.1	145.1
1907....	144.9	139.2	118.3	97.9	108.1	165.8	161.4	182.9	169.3	174.9

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year	Metals and implements.									
	Quicksilver.	Silver: bar, fine.	Spelter western.	Steel billets.	Steel rails.	Steel sheets black, No 27.(a)	Tin. pig.	Tin plates.		
								Domestic, Bessemer, coke, 14x20 (b)	Imported, Bessemer, coke, I C., 14x20 (c)	Average.
1890...	130.5	140.6	122.6	141.5	121.9	....	115.5	....	104.6	104.6
1891...	112.3	132.2	112.4	117.7	114.8	....	110.3	....	116.4	116.4
1892....	100.9	116.9	102.9	109.8	115.1	....	110.9	......	115.7	115.7
1893 ..	93.2	104.4	90.7	94.9	107.9	....	109.0	....	117.1	117.1
1894...	85.7	85.5	78.5	77.0	92.1	104.9	98.7	....	106.7	106.7
1895....	91.8	88.5	80.1	85.9	93.4	108.9	76.5	....	84.4	84.4
1896 ..	89.0	91.0	88.7	87.5	107.4	96.0	72.4	100.6	82.9	91.8
1897....	92.2	81.1	93.1	70.1	71.9	87.1	74.0	93.2	85.1	89.2
1898...	97.0	78.9	100.2	71.1	67.6	84.8	84.5	83.5	87.2	85.4
1899 ...	107.3	80.8	130.1	144.6	107.9	119.2	148.2	122.7	(d)	122.7
1900.. .	121.0	82.9	97.8	116.4	123.9	130.8	163.7	137.0	(d)	137.0
1901....	118.5	79.7	89.6	112.1	104.9	140.6	142.6	122.7	(d)	122.7
1902....	115.5	70.5	107.7	142.1	107.4	129.9	144.2	120.7	(d)	120.7
1903....	113.4	72.4	123.5	129.7	107.4	116.1	153.4	115.4	(d)	115.4
1904 ...	105.5	77.2	113.9	103.0	107.4	93.8	152.5	105.5	(d)	105.5
1905 . .	97.4	81.5	131.0	111.6	107.4	99.1	170.3	108.5	(d)	108.5
1906....	98.6	90.0	137.2	127.5	107.4	105.8	213.6	113.1	(d)	113.1
1907...	97.1	88.1	136.5	135.9	107.4	111.6	211.1	119.8	(d)	119.8

Year.	Tools								
	Augers extra, ¾-inch.	Axes: M C O, Yankee	Chisels: extra, socket firmer, 1-inch.	Files 8-inch mill bastard.	Hammers Maydole No. 1½.	Planes Bailey No 5.	Saws.		
							Crosscut, Disston	Hand, Disston No. 7.	Average.
1890.....	118.2	120.4	110.9	106.7	96.9	107.4	100.0	112.7	106.4
1891.....	118.2	118.3	110.9	104.6	96.9	107.4	100.0	98.6	99.3
1892.....	118.2	106.5	110.9	102.2	96.9	107.4	100.0	98.6	99.3
1893....	111.9	106.5	102.1	101.6	96.9	107.4	100.0	98.6	99.3
1894....	95.9	100.9	91.5	97.3	96.9	104.3	100.0	98.6	99.3
1895.....	82.9	98.0	90.3	95.4	97.6	93.9	100.0	98.6	99.3
1896.....	86.7	88.4	94.7	91.2	105.2	93.0	100.0	98.6	99.3
1897.....	88.6	83.9	90.3	94.4	105.2	93.0	100.0	98.6	99.3
1898.....	88.6	79.9	90.8	96.8	100.6	93.0	100.0	98.6	99.3
1899.....	91.1	97.1	107.6	109.7	107.0	93.0	100.0	98.6	99.3
1900.....	124.4	102.9	127.6	127.8	115.9	107.0	100.0	98.6	99.3
1901.....	105.7	88.8	121.4	123.1	117.2	110.4	100.0	98.6	99.3
1902.....	111.9	103.0	142.6	123.1	117.2	114.2	100.0	98.6	99.3
1903.....	143.7	107.6	147.8	123.1	129.0	115.7	100.0	98.6	99.3
1904.....	149.3	123.3	158.4	122.0	129.0	115.7	100.0	98.6	99.3
1905.....	190.7	134.7	209.5	121.6	129.0	115.7	100.0	98.6	99.3
1906	221.8	143.1	221.1	119.8	129.0	129.3	100.0	101.3	100.7
1907.....	223.9	144.9	234.3	117.0	129.0	115.7	100.0	101.3	100.7

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[a] Average for the period July, 1894, to December, 1899=100.0.
[b] Average for 1896-1899=100.0.
[c] Average for 1890-1898=100.0.
[d] Quotations discontinued.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Metals and implements.						
	Tools				Wood screws 1-inch, No 10, flat head	Zinc sheet	Average, metals and implements.
	Shovels Ames No 2	Trowels M C O, brick, 10½-inch	Vises solid box, 50-pound	Average			
1890	100.1	100.0	106.1	107.2	130.5	114.0	119.2
1891	100.1	100.0	106.1	105.6	132.5	107.7	111.7
1892	100.1	100.0	109.1	104.5	139.1	103.4	106.0
1893	100.1	100.0	107.6	103.0	139.1	94.0	100.7
1894	94.7	100.0	104.0	98.6	103.2	74.4	90.7
1895	94.7	100.0	97.2	95.3	74.0	85.1	92.0
1896	99.3	100.0	95.4	95.7	68.4	93.0	93.7
1897	100.8	100.0	89.7	95.0	56.3	93.0	86.6
1898	100.8	100.0	84.1	93.9	60.8	103.5	86.4
1899	109.4	100.0	100.7	101.3	96.2	131.9	114.7
1900	115.9	100.0	109.4	111.8	120.5	114.8	120.5
1901	115.9	100.0	128.7	110.0	69.2	104.7	111.9
1902	118.9	100.0	131.5	114.6	63.0	107.9	117.2
1903	102.0	100.0	132.7	118.2	72.4	113.3	117.6
1904	97.3	100.0	109.1	118.4	62.6	105.6	109.6
1905	96.9	100.0	106.1	127.5	69.9	128.5	122.5
1906	96.9	100.0	115.9	134.4	69.9	135.0	135.2
1907	99.7	100.0	147.4	115.7	80.7	140.9	143.4

Year.	Lumber and building materials.							
	Brick common domestic	Carbonate of lead. American, in oil	Cement.			Doors pine	Lime common.	Linseed oil raw.
			Portland, domestic[a]	Rosendale	Average			
1890	118.0	110.6	....	118.8	118.8	125.8	117.5	135.8
1891	102.6	112.7	....	106.2	106.2	114.4	109.5	106.8
1892	103.7	114.0	....	109.2	109.2	114.4	111.5	90.0
1893	104.9	105.5	....	100.0	100.0	112.1	111.5	102.2
1894	89.9	90.8	....	104.5	104.5	96.1	101.8	115.6
1895	95.5	91.0	98.6	96.1	97.4	83.5	93.8	115.6
1896	91.0	89.6	100.2	93.9	97.1	76.6	83.3	81.2
1897	88.8	92.7	98.5	84.8	91.7	74.3	86.3	72.2
1898	103.4	94.1	100.1	85.7	92.9	84.6	89.0	86.5
1899	102.2	98.4	102.6	100.8	101.7	118.2	95.8	94.1
1900	94.4	108.3	108.1	114.6	111.4	145.5	82.0	138.7
1901	103.7	99.8	94.7	114.8	104.8	173.1	92.9	140.0
1902	96.8	93.4	97.7	97.5	97.6	194.1	96.7	130.8
1903	106.2	106.6	101.6	100.3	101.0	158.2	94.5	91.9
1904	134.7	103.6	73.2	90.4	81.8	154.6	99.0	91.7
1905	145.7	109.7	71.5	93.9	82.7	163.2	106.9	103.1
1906	153.7	119.6	78.9	107.1	93.0	153.5	113.7	89.3
1907	110.7	120.8	82.4	107.1	94.8	167.5	113.9	95.7

[a] Average for 1895-1899=100.0.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year	Lumber and building materials.									
			Oak white.			Pine.				
						White, boards.				
	Hemlock	Maple hard.	Plain	Quartered.	Average.	No. 2 barn.	Uppers.	Average.	Yellow.	Average.
1890	105.2	100.0	101.2	95.9	98.6	98.1	94.7	96.4	112.4	101.7
1891	104.1	100.0	101.5	99.8	100.7	99.4	96.7	98.1	108.1	101.4
1892	102.8	100.0	102.7	98.7	100.7	100.2	98.9	99.6	100.2	99.8
1893	100.3	100.0	103.5	98.7	101.1	108.9	104.2	106.6	100.2	104.4
1894	97.9	100.0	99.5	95.2	97.4	106.2	99.7	103.0	100.2	102.0
1895	93.2	100.0	96.8	99.2	98.0	100.8	98.8	99.8	91.6	97.1
1896	93.3	100.0	96.8	101.5	99.2	96.4	100.2	98.3	88.9	95.2
1897	92.0	100.0	96.8	100.3	98.6	92.5	99.5	96.0	89.0	93.7
1898	98.2	100.0	96.8	97.8	97.3	90.6	99.0	94.8	100.9	96.8
1899	113.0	100.1	104.1	112.7	108.4	106.9	108.4	107.7	108.5	107.9
1900	137.9	103.8	109.1	120.1	114.6	125.7	123.5	124.6	112.2	120.5
1901	125.4	100.8	98.2	110.2	104.2	122.0	129.8	125.9	106.5	119.4
1902	132.4	107.8	109.2	117.5	113.4	137.3	160.7	149.0	113.7	137.2
1903	140.4	119.5	119.8	139.3	129.6	140.3	171.8	156.1	113.7	141.9
1904	142.1	117.0	124.2	150.4	137.3	134.4	174.0	154.2	116.0	141.5
1905	149.4	115.1	126.5	149.5	138.0	141.2	176.1	158.7	134.9	150.7
1906	183.0	117.0	134.7	147.5	141.1	173.9	182.0	178.0	158.9	171.6
1907	186.0	121.7	147.5	149.0	148.3	195.7	200.2	198.0	165.2	187.0

Year	Lumber.			Oxide of zinc	Plate glass polished.			Putty.	Resin, good, strained.
	Poplar.	Spruce.	Average		Area 3 to 5 sq. ft.	Area 5 to 10 sq. ft.	Average.		
1890	97.2	113.5	102.0	106.3	146.0	134.9	140.5	110.8	96.1
1891	97.2	99.1	100.7	104.8	143.3	132.9	138.1	110.8	102.4
1892	97.6	103.5	100.5	106.5	115.7	106.0	110.9	101.9	93.2
1893	107.2	96.0	102.1	103.3	115.7	106.0	110.9	101.3	87.6
1894	101.2	88.6	98.7	93.3	90.9	86.7	88.8	99.4	86.9
1895	98.8	99.3	97.6	87.5	82.6	92.5	87.6	91.8	108.4
1896	98.8	99.3	97.2	95.8	93.7	104.0	98.9	91.8	121.2
1897	97.8	97.6	96.2	94.3	55.1	61.7	58.4	91.8	112.0
1898	95.6	95.8	97.2	99.0	74.4	82.9	78.7	91.8	98.7
1899	108.5	107.3	107.7	109.5	82.6	92.5	87.6	106.3	93.5
1900	120.2	121.1	119.3	112.8	93.7	104.0	98.9	120.3	111.3
1901	117.0	125.4	115.0	109.5	88.2	94.4	91.3	94.9	106.3
1902	134.2	134.2	127.4	110.0	70.9	79.2	75.1	121.5	112.0
1903	158.3	133.7	137.4	115.8	72.3	83.1	77.7	89.2	153.9
1904	160.5	142.9	140.2	115.8	62.7	70.3	66.5	69.6	196.8
1905	153.7	149.3	144.0	116.3	66.3	71.8	69.1	69.0	237.7
1906	162.5	178.0	159.7	127.0	76.1	77.7	76.9	75.3	278.8
1907	185.2	167.3	168.6	134.5	77.2	80.1	78.7	75.9	304.0

TABLE V.--YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	Lumber and building materials.								
	Shingles.			Tar.	Turpentine spirits of	Window glass: American, single.			Average, lumber and building materials.
	Cypress.	White pine.	Average.			Firsts, 6 x 8 to 10 x 15 inch.	Thirds, 6 x 8 to 10 x 15 inch.	Average	
1890....	118.7	102.6	110.7	122.4	122.0	103.6	98.2	100.9	111.8
1891....	115.2	106.9	111.1	131.4	113.5	102.8	97.3	100.1	108.4
1892....	111.7	104.4	108.1	107.9	96.5	92.7	87.7	90.2	102.8
1893....	106.3	102.8	104.6	86.8	89.8	99.4	94.0	96.7	101.9
1894....	99.2	100.2	99.7	90.6	87.7	92.6	89.8	91.2	96.3
1895....	93.9	98.8	96.4	94.8	87.4	74.3	76.5	75.4	94.1
1896....	88.6	96.5	92.6	84.0	82.1	83.8	88.0	85.9	93.4
1897....	83.3	94.6	89.0	87.5	87.5	102.2	107.9	105.1	90.4
1898....	88.6	94.9	91.8	91.1	96.4	122.9	128.8	125.9	95.8
1899....	94.4	98.3	96.4	103.4	137.0	125.9	131.9	128.9	105.8
1900....	101.0	106.9	104.0	113.1	142.7	125.5	127.5	126.5	115.7
1901....	101.0	111.9	106.5	106.4	111.5	191.9	180.4	186.2	116.7
1902....	94.7	123.0	108.9	110.0	141.8	149.6	141.0	145.3	118.8
1903....	91.0	125.1	108.1	139.4	171.0	122.7	118.7	120.7	121.4
1904....	92.2	122.5	107.4	139.4	172.2	134.2	128.0	131.1	122.7
1905....	96.6	119.9	108.3	145.9	187.7	128.5	117.5	123.0	127.7
1906....	114.9	[a] 157.2	136.1	162.5	198.9	135.7	124.0	129.9	140.1
1907....	149.8	[a] 191.5	170.7	193.3	189.8	130.8	123.2	127.0	146.9

Year.	Drugs and chemicals.									
	Alcohol grain.	Alcohol: wood, refined, 95 per cent	Alum lump	Brimstone crude, seconds	Glycerin refined	Muriatic acid. 20°.	Opium: natural, in cases.	Quinine: American.	Sulphuric acid. 66°.	Average, drugs and chemicals.
1890...	92.5	119.2	109.0	102.2	126.3	100.0	111.0	133.1	98.9	110.2
1891...	98.9	121.6	94.6	138.2	109.9	94.2	82.4	102.0	91.0	103.6
1892...	95.6	136.0	95.8	116.7	99.8	116.3	70.8	88.7	106.7	102.9
1893...	97.3	135.4	104.2	90.5	96.2	97.1	101.3	87.4	95.5	100.5
1894...	96.1	75.5	101.2	80.1	85.3	84.6	96.8	106.5	82.0	89.8
1895...	104.0	90.9	95.8	75.5	86.1	79.8	78.0	102.0	78.7	87.9
1896...	102.7	89.1	98.2	86.8	119.4	72.1	88.6	97.8	78.7	92.6
1897...	101.6	72.9	99.4	97.2	93.5	104.8	99.2	74.3	106.7	94.4
1898...	103.8	78.6	98.8	110.7	88.5	123.1	141.6	87.2	127.0	106.6
1899...	107.6	80.8	100.6	102.1	95.0	129.8	130.2	120.9	134.8	111.3
1900...	106.5	83.9	104.8	102.2	108.3	129.8	135.6	135.2	134.8	115.7
1901...	109.7	64.2	104.8	106.3	107.5	144.2	136.8	123.0	140.4	115.2
1902...	107.4	67.3	104.8	113.2	103.2	161.5	120.0	104.7	146.1	114.2
1903...	106.9	62.0	103.6	107.9	103.4	153.8	130.6	102.6	142.7	112.6
1904...	108.6	61.6	104.8	105.2	99.8	153.8	116.5	94.8	144.9	110.0
1905...	108.3	70.8	104.8	102.8	88.5	153.8	128.5	85.4	139.3	109.1
1906...	110.0	73.4	104.8	107.1	80.7	129.8	125.0	67.4	112.4	101.2
1907...	112.6	41.8	104.8	103.9	98.9	129.8	209.6	72.2	112.4	109.6

[a] Shingles, red cedar, random width, 16 inches long. For method of computing relative price, see pages 327 and 328.

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Continued.

[Average price for 1890-1899=100.0.]

Year.	House furnishing goods.								
	Earthenware.				Furniture.				
	Plates, cream-colored	Plates, white granite	Teacups and saucers, white granite	Average.	Bedroom sets, ash.	Chairs, bedroom, maple.	Chairs, kitchen.	Tables, kitchen.	Average.
1890....	108.0	109.1	109.6	108.9	113.7	113.0	109.8	103.9	110.1
1891....	105.6	106.9	107.4	106.6	113.7	113.0	109.8	103.9	110.1
1892....	102.3	103.7	104.2	103.4	113.7	110.6	111.1	103.9	109.8
1893....	102.3	103.7	104.2	103.4	104.2	110.6	111.1	103.9	107.5
1894....	101.0	101.9	102.8	101.9	104.2	96.9	91.5	98.7	97.8
1895....	94.6	92.9	94.4	94.0	94.3	96.9	91.5	98.7	95.4
1896....	92.0	89.1	90.1	90.4	82.9	96.9	91.5	95.6	91.7
1897....	92.0	89.1	90.1	90.4	82.9	80.7	91.5	95.6	87.7
1898....	100.4	100.8	98.0	99.7	94.7	82.7	86.6	95.6	89.9
1899....	101.7	102.9	99.2	101.3	95.7	98.9	105.7	100.1	100.1
1900....	106.6	108.1	104.3	106.3	106.6	129.1	136.1	108.1	120.0
1901....	112.5	113.8	109.7	112.0	106.6	113.0	124.2	108.1	113.0
1902....	112.5	113.8	109.7	112.0	111.3	118.4	128.5	108.1	116.6
1903....	115.4	111.4	107.4	111.4	115.3	127.8	130.7	108.1	120.5
1904....	113.8	110.4	106.4	110.2	116.1	129.1	124.7	108.1	119.5
1905....	106.6	102.4	98.8	102.6	117.0	129.1	124.2	108.1	119.6
1906....	106.6	102.4	98.8	102.6	122.8	143.9	134.0	114.3	128.8
1907....	106.6	102.4	98.8	102.6	137.4	161.4	151.4	124.7	143.7

Year	Glassware.				Table cutlery.			Wooden ware.			Average, house furnishing goods.
	Nappies, 4-inch.	Pitchers, ½-gallon, common.	Tumblers, ⅓-pint, common.	Average.	Carvers, stag handles	Knives and forks, cocobolo handles	Average.	Pails, oak-grained	Tubs, oak-grained	Average.	
1890....	107.1	106.4	101.4	105.0	100.0	127.9	114.0	122.6	122.5	122.6	111.1
1891....	107.1	106.4	112.7	108.7	100.0	127.9	114.0	111.6	116.3	114.0	110.2
1892....	107.1	106.4	107.0	106.8	100.0	113.0	106.5	103.9	103.9	103.9	106.5
1893....	107.1	106.4	107.0	106.8	118.8	90.8	104.8	101.1	97.1	99.1	104.9
1894....	107.1	106.4	107.0	106.8	100.0	90.8	95.4	96.9	95.6	96.3	100.1
1895....	107.1	106.4	104.2	105.9	100.0	90.8	95.4	86.3	92.8	89.6	96.5
1896....	89.3	106.4	101.4	99.0	100.0	90.8	95.4	97.2	92.8	95.0	94.0
1897....	89.3	85.1	95.8	90.1	93.8	82.5	88.2	95.6	92.8	94.2	89.8
1898....	89.3	85.1	90.1	88.2	93.8	90.8	92.3	87.3	92.8	90.1	92.0
1899....	89.3	85.1	73.2	82.5	93.8	94.9	94.4	97.5	93.4	95.5	95.1
1900....	89.3	85.1	101.4	91.9	93.8	94.9	94.4	114.9	107.0	111.0	106.1
1901....	125.0	110.6	101.4	112.3	93.8	107.3	100.6	119.3	107.6	113.5	110.9
1902....	125.0	110.6	104.2	113.3	93.8	107.3	100.6	119.3	107.6	113.5	112.2
1903....	125.0	110.6	99.5	111.7	93.8	107.3	100.6	122.2	107.6	114.9	113.0
1904....	125.0	97.9	90.1	104.3	93.8	110.0	101.9	130.9	107.6	119.3	111.7
1905....	125.0	89.4	84.5	99.6	93.8	110.4	102.1	130.9	107.6	119.3	109.1
1906....	125.0	89.4	84.5	99.6	93.8	99.8	96.8	130.9	107.6	119.3	111.0
1907....	125.0	89.4	84.5	99.6	100.0	107.0	103.5	151.7	118.8	135.3	118.5

TABLE V.—YEARLY RELATIVE PRICES OF COMMODITIES, 1890 TO 1907—Concluded.

[Average price for 1890-1899=100.0.]

Year.	Miscellaneous.							
	Cotton-seed meal.	Cotton-seed oil summer yellow, prime	Jute: raw.	Malt: western made.	Paper.			Proof spirits.
					News.	Wrapping, manila	Average.	
1890 …	106.4	113.2	108.1	106.7	127.8	104.0	115.9	91.6
1891 …	114.8	117.2	103.3	131.9	113.7	104.0	108.9	96.1
1892 …	107.9	101.4	132.3	114.0	113.7	100.9	107.3	93.5
1893 …	117.6	149.5	96.4	110.3	106.4	104.7	105.6	93.2
1894 …	102.7	106.4	96.1	105.9	108.0	105.6	106.8	98.5
1895 …	86.1	89.4	77.7	97.5	103.0	106.0	104.5	105.3
1896 …	90.8	82.6	88.9	80.1	92.0	106.3	99.2	104.6
1897 …	93.1	77.7	103.9	77.4	90.6	106.3	98.5	102.9
1898	86.5	75.2	92.5	87.7	73.2	83.0	78.1	106.3
1899 …	94.7	87.5	101.7	88.5	69.9	79.2	74.6	108.0
1900 …	116.3	116.8	121.2	93.0	94.0	86.8	90.4	108.4
1901	113.9	117.3	111.4	106.0	75.6	90.8	83.2	111.8
1902 …	123.5	133.6	122.0	112.7	80.9	89.9	85.4	114.3
1903 …	121.6	130.7	129.2	103.1	84.6	95.1	89.9	111.4
1904	119.3	103.0	123.7	96.1	89.3	95.8	92.6	110.4
1905 …	120.0	88.6	151.0	87.5	80.9	91.9	87.9	109.7
1906 …	138.4	118.7	204.5	92.1	73.2	90.4	81.8	112.0
1907 …	130.7	160.0	184.4	147.2	83.3	91.5	87.4	114.2

Year.	Rope manila.	Rubber: Para Island.	Soap: castile, mottled, pure.	Starch: laundry.	Tobacco.			Average, miscellaneous.
					Plug.	Smoking, granulated, Seal of N. C.	Average.	
1890 …	160.0	104.6	104.4	106.6	102.2	98.2	100.2	110.3
1891 …	111.1	98.8	109.1	122.4	101.2	98.2	99.7	109.4
1892 …	122.9	84.5	109.7	107.2	94.0	98.2	96.1	106.2
1893 …	98.4	89.5	108.1	105.2	100.1	98.2	99.2	105.9
1894 …	82.4	84.2	103.3	105.2	101.0	98.2	99.6	99.8
1895	78.7	92.7	89.1	104.3	101.0	98.2	99.6	94.5
1896 …	71.1	99.9	88.2	89.1	96.1	98.2	97.2	91.4
1897 …	67.6	105.6	93.3	86.2	94.9	98.2	96.6	92.1
1898 …	90.1	115.8	96.7	86.2	104.3	104.1	104.2	92.4
1899 …	117.1	124.3	98.1	86.2	105.4	110.0	107.7	97.7
1900 …	141.3	122.6	107.7	97.7	111.9	110.0	111.0	109.8
1901 …	116.9	106.1	115.1	104.3	117.6	110.0	113.8	107.4
1902 …	144.3	90.8	116.5	130.5	114.6	109.9	112.3	114.1
1903 …	122.7	113.1	115.6	123.9	113.6	112.0	112.8	113.6
1904 …	125.4	135.8	113.7	106.0	118.6	114.4	116.5	111.7
1905 …	127.9	155.2	114.2	94.5	123.7	117.9	120.8	112.8
1906 …	134.0	151.5	114.2	105.5	122.0	117.9	120.0	121.1
1907 …	138.1	132.8	117.9	116.1	118.6	117.9	118.3	127.1

INDUSTRIAL HYGIENE.

BY GEORGE M. KOBER, M. D.

INTRODUCTION.

It was shown by observation long ago that certain occupations and trades were dangerous to health. In the interest of wage-earners and the public at large it is clearly desirable to study the relation of a person's trade or occupation to his health and longevity, the source and significance of the dangers, and the possible means for their prevention or the mitigation of their injurious effects.

A pioneer study was made by Professor Ramazzini, of Padua, as early as 1670, and his monograph was translated into English in 1705, and also into French in 1777.

In 1810 the French Government issued a decree relating to "établissements dangereux, insalubres et incommodes," and in 1815 the English Parliament instituted a commission to inquire into the condition of factories, etc. In 1822 Mr. C. Turner Thackrah, of Leeds, wrote a monograph "On the effects of the arts, trades, and professions, and of civic states and habits of living on health and longevity." In 1833 and 1865 the English Parliament again appointed commissioners, and in 1839 the "Academie des sciences morales et politiques" of France, and subsequently Bavaria, Prussia, and the German Empire directed similar investigations. As a result of these efforts and numerous independent investigations, it is known that the character of the occupation influences to a great extent not only the average expectation of life, but also the prevalence of certain diseases.

It is known, for example, that bronchitis, pneumonia, and tuberculosis are extremely frequent in dusty occupations, and that the sharp angular particles of iron and stone dust are more liable to produce injury of the respiratory passages than coal, flour, grain, and other kinds of dust. It is also known that workers in lead, mercury, arsenic, phosphorus, poisonous dyes, etc., suffer from their injurious effects, and that other occupations, such as mining, railroading, and those which necessitate working with or around moving machinery involve special danger to life and limb.

In 1833, 1864, 1867, and 1870, England enacted the so-called "factory laws." France provided a child labor law in 1841 and in 1874 a more satisfactory labor code. Germany and other continental governments enacted suitable legislation between 1859 and 1886.

According to Miss S. S. Whittelsey's "Essay on Massachusetts Labor Legislation," child labor received attention in Massachusetts as early as 1836. The first law as regards safety and sanitation was enacted in that State in 1877, since which time all the States and Territories have enacted some form of labor or factory laws.

MORBIDITY AND MORTALITY OF WAGE-EARNERS.

The statistics of the morbidity and mortality of various occupations, while far from satisfactory, and subject to more or less erroneous conclusions, nevertheless indicate that persons habitually engaged in hard work are more frequently subject to disease and present a higher mortality than persons more favorably situated, and this is especially true of factory employees, because their work is generally more monotonous, fatiguing, and performed under less favorable surroundings, and they are too often also badly nourished and badly housed.

Among the occupations usually classed as inimical to health are bleachers, bookbinders, brass founders, compositors, coppersmiths, electrotypers, stonecutters, gas-works employees, white-lead workers, match workers, persons employed in the manufacture of explosives, firemen, potters, file makers, and operatives in rubber factories.

The following table from the reports of the Twelfth Census shows the death rates per 1,000 employees for leading causes and for all causes in certain occupations in 1900:

DEATH RATE PER 1,000 EMPLOYEES IN CERTAIN OCCUPATIONS IN REGISTRATION STATES IN 1900, BY PRINCIPAL CAUSES OF DEATH.

Occupation.	Death rate per 1,000.						
	Tuberculosis of lungs.	Diseases of nervous system.	Heart disease.	Pneumonia.	Diseases of urinary organs.	Accidents and injuries.	All causes.
MANUFACTURING AND MECHANICAL INDUSTRIES.							
Bakers and confectioners	2.50	1.61	1.02	1.17	1.46	0.61	12.3
Blacksmiths	2.13	2.99	1.90	1.69	1.90	1.00	18.3
Boot and shoe makers	1.36	1.59	1.46	.95	.79	.33	9.4
Brewers, distillers, and rectifiers	2.57	2.74	2.23	2.40	2.57	1.37	19.7
Butchers	2.88	2.30	1.78	1.73	1.36	.81	16.1
Cabinetmakers and upholsterers	3.59	2.22	1.61	1.74	1.57	.65	18.0
Carpenters and joiners	2.31	2.15	2.21	1.46	1.74	1.18	17.2
Cigar makers and tobacco workers	4.77	1.80	1.76	2.15	1.68	.70	18.7
Compositors, printers, and pressmen	4.36	1.31	.94	1.16	.94	.50	12.1
Coopers	3.00	2.90	2.72	2.09	3.08	1.36	23.8
Engineers and firemen (not locomotive)	2.30	2.09	1.81	1.78	1.67	1.84	15.7
Iron and steel workers	2.36	.92	1.02	1.82	.77	.79	10.7
Leather makers	3.11	1.02	1.26	1.32	.84	.60	12.3
Leather workers	2.27	2.68	2.11	.97	2.27	.97	17.5
Machinists	1.96	1.24	1.04	1.10	.98	.71	10.5
Marble and stone cutters	5.41	1.10	1.60	1.37	.84	.90	14.9
Masons (brick and stone)	2.94	2.27	2.32	2.30	1.83	1.58	19.9
Mill and factory operatives (textiles)	2.08	.84	.91	.81	.57	.76	8.8
Millers (flour and grist)	1.99	4.47	3.81	2.98	2.48	1.98	26.6
Painters, glaziers, and varnishers	3.19	2.14	1.70	1.54	1.83	1.28	16.2
Plumbers and gas and steam fitters	2.94	.91	.60	1.13	.88	.76	9.1
Tailors	2.18	1.43	1.29	1.13	1.38	.51	11.8
Tinners and tinware makers	3.65	1.78	1.27	1.37	1.32	.91	14.5
AGRICULTURE, TRANSPORTATION, AND OTHER OUTDOOR CLASSES.							
Draymen, hackmen, teamsters, etc	2.61	.90	.95	1.48	.90	1.34	11.0
Farmers, planters, and farm laborers	1.12	2.71	2.63	1.49	1.71	.84	17.6
Miners and quarrymen	1.21	.39	.57	.77	.49	3.78	9.6
Steam railroad employees	1.90	.96	.89	.60	.65	4.10	10.8

The following table from the report of the registrar-general of England and Wales shows the comparative mortality of occupations in England and Wales, 1890-1892. The average mortality of all males of the population between 25 and 65 years of age was placed at 1,000. The mortality of occupied males was 953 and of the unoccupied 2,215.

COMPARATIVE MORTALITY OF OCCUPATIONS IN ENGLAND AND WALES, 1890 TO 1892.

Occupation.	Comparative mortality.	Occupation.	Comparative mortality.
Clergymen, priests, ministers	533	Bricklayers, masons, builders	1,001
Gardeners, nurserymen	553	Butchers	1,096
Farmers, graziers	563	Printers	1,096
Schoolmasters, teachers	604	Plumbers, painters, glaziers	1,120
Grocers, etc	664	Cotton manufacturers (Lancashire)	1,176
Carpenters, joiners	783	Carmen, carriers	1,284
Barristers, solicitors	821	Slaters, tilers	1,322
Fishermen	845	Brewers	1,427
Shopkeepers	859	Innkeepers, hotel servants	1,659
Medical practitioners	966	Potters, earthenware manufacturers	1,706
Tailors	989	File makers	1,810

A reasonable explanation for the excessive mortality in some of the occupations will be found in subsequent pages; the high rates in brewers, innkeepers, and hotel servants are believed to be due to the effects of alcohol.

According to Rauchberg(a) the average number per 1,000 members of the "Vienna Sick Benefit Society" taken sick during a period of 17 years was 423 per annum distributed as follows:

Occupation.	Average number taken sick per 1,000 members.	Occupation.	Average number taken sick per 1,000 members.
Machinists' helpers	488	Iron workers	351
Factory employees and day laborers	477	Shoemakers	343
Foundrymen	473	Tinners and bronzers	330
Blacksmiths	451	Cabinetmakers and wood workers	326
Masons and stonecutters	437	Saddlers	282
Painters	378	Tailors and furriers	215
Weavers and spinners	367	Other mechanics	463
Locksmiths	354		

The subject of industrial diseases and industrial accidents is everywhere assuming more and more importance and our knowledge should be based upon accurate data. In England, where reports of certain occupations are compulsory, it is possible to secure, for example, reliable data as to the number of cases of lead poisoning. The same facilities are afforded by the statistics of the "German Industrial Insurance Institutes," which furnish not only the number of deaths from various causes, but also the number of cases treated, together with the age period and the duration of the disease. Similar facts

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[a] Die allg. Arbeiter-Kranken und Invalidencasse in Wien, 1886.

should be collected in this country. This is all the more important when it is remembered that even with the most complete statistics, it is extremely difficult to determine all the factors which influence the health and longevity of operatives. Great differences are found in the conditions under which the work is performed, some of which are entirely avoidable, while others are not, and it is hardly fair to characterize certain trades as dangerous, when experience has shown that no harm results when proper safeguards have been taken. In the consideration of this question the personal element of the workmen, their habits, mode of life, food, home environments, etc., can not be ignored. There are a number of occupations in which the alcohol habit prevails to an unusual extent, perhaps because of the character of the work, perhaps as a result of association, and it would not be fair to attribute the ill health of the operatives altogether to the character of the employment. Again, many persons are engaged in occupations for which they are not physically fitted, while others ruin their health by vice, dissipation, improper food, and insanitary environment at home. In addition to all this there are factors, such as water and soil pollution, for which neither the industry nor the individuals are primarily to blame. Thus, for example, the general anæmia of the agricultural classes in Porto Rico was attributed a few years ago to their occupation and starvation, when as a matter of fact it was caused by the "hook-worm disease." Recent investigations conducted by Doctor Stiles appear to indicate that the same disease prevails to some extent among the textile operatives in the South. All this indicates the need of a thorough study of the conditions affecting health in various occupations, not only to determine the relative health risks and the causes of the undue prevalence of certain diseases in certain occupations, but also to formulate rules which may remove the causes or render the system better fitted to resist them. In this, as in all preventive efforts, a hearty cooperation of the parties interested is absolutely essential for the attainment of the highest measure of success. In this instance the responsibility rests with the state, the employer, and employees; each have certain duties to perform, and the help of all is essential for the mitigation of existing evils.

INDOOR OCCUPATIONS.

Indoor employment, broadly speaking, is inimical to health, while outdoor work in a pure air favors health and longevity. Without underrating the influence of insanitary dwellings, improper and insufficient food, lack of recreation, and other factors, there is no doubt that one of the chief dangers of indoor life is exposure to vitiated air. The air in dwellings and workshops is never so pure as the outer air, because it is polluted by the products of respiration, combustion, and decomposition, and the presence of individuals also tends to vitiate the air with dust, germs, and organic matter from the skin, mouth, lungs, and soiled clothing. Unless proper provision is made for the dispersion of foul air and the introduction of pure air there is much reason for assuming that these impurities play a more or less important rôle in what has been designated as "crowd poisoning," characterized in the acute form by symptoms of oppression, headache, dizziness, and faintness, while the chronic effects of deficient oxygenation and purification of the blood are plainly evinced by the pallor, loss of appetite, anæmia, and gradual loss of physical and mental vigor. All of these effects are intensified when human beings are obliged to occupy rooms with an air supply insufficient for the proper oxygenation of the blood, and as a result of this habitual exposure to vitiated air, we note an undue prevalence of consumption in crowded workshops, dwellings, prisons, public institutions, and formerly also in military barracks and battle ships. Even live stock shows the baneful effects of insufficient air space, for tuberculosis among the range cattle of the far west, which are practically without shelter, is comparatively rare, while it affects from 15 to 25 per cent of dairy herds, which are housed, but without sufficient regard to light and air. Improved ventilation and increased air space has everywhere lessened the death rate, and it is chiefly by just such measures that the rate from consumption has been reduced from 11.9 to 1.2 per 1,000 in the British armies. As a matter of fact, an abundance of pure air has been found the most important factor in the treatment of tuberculosis, because it promotes oxygenation of the blood, stimulates the appetite and nutrition, and thereby increases the general resisting power of the system.

OCCUPATIONS INVOLVING EXPOSURE TO IRRITATING DUST.

It has long been known that the inhalation of dust predisposes to diseases of the respiratory passages, which may result in consumption. The particles of mineral dust produce an irritation of the mucous membranes of the nose, throat, respiratory organs, and eyes, and the hard, sharp, and angular particles of iron and stone dust may cause actual abrasions. According to Arnold([a]) the dust which is inhaled lodges on the mucous membranes of the air passages and vesicles of the lungs, there to be coughed up, although some of the finest particles are taken up by the epithelial cells and white corpuscles and carried to the nearest lymphatic glands. The coarser particles, such as iron, stone, or coal dust, usually lodge upon the surface to be coughed up with the secretions. If not expectorated they will cause harm by clogging up the air vesicles and interfere with respiration. In the meantime not infrequently an irritation is set up, causing catarrhal conditions of the mucous membranes, or a more serious chronic inflammation of the respiratory organs, so common among persons engaged in dusty occupations. The chronic inflammatory conditions thus produced favor infection with the tubercle bacillus. At all events Hirt's statistics show that men employed in occupations that produce much dust suffer more frequently from pneumonia and consumption than those not exposed to dust and that there is practically no difference in frequency of diseases of the digestive system. The relative frequency of these diseases per 1,000 workmen is as follows:([a])

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[a] Untersuchungen über Staubinhalation, etc., Leipzig, 1885.

CASES OF CONSUMPTION, PNEUMONIA, AND DIGESTIVE DISORDERS PER 1,000 WORKERS IN CERTAIN OCCUPATIONS.

Class of occupations.	Consumption.	Pneumonia.	Digestive disorders.
Workers in metallic dust	28.0	17.4	17.8
Workers in mineral dust	25.2	5.8	16.6
Workers in mixed dust	22.6	6.0	15.2
Workers in animal dust	20.8	7.7	20.2
Workers in vegetable dust	13.3	9.4	15.7
Workers in nondusty trades	11.1	4.6	16.0

Perlen in his "Inaugural Dissertation," Munich, 1887,([b]) discussed the records of the Munich Polyclinic, where 65,766 persons were treated between 1865 and 1885, including 4,177 tubercular patients. Of these, 1,125 patients had been engaged in occupations where they were exposed to dust, viz:

30 per cent were by reason of occupation exposed to metallic dust.
26 per cent were by reason of occupation exposed to vegetable dust.
18 per cent were by reason of occupation exposed to mineral dust.
17 per cent were by reason of occupation exposed to mixed dust.
8 per cent were by reason of occupation exposed to animal dust.

According to the reports of the census of 1900 the consumption death rate of marble and stone cutters in the United States is nearly six times that of bankers, brokers, and officials of companies, and the rate in fifty-one other employments ranges between these extremes.

The amount of dust is perhaps less important than the character of the particles which compose it. The susceptibility to consumption among metal workers and stonecutters can be explained only by the fact that the hard, sharp, and irregular particles of this kind of dust are more apt to produce injury of the mucous membranes of the respiratory tract. But it is not fair to assume that the less irritating dust is free from danger, for as pointed out by E. Roth([c]) even the inhalation of plaster of Paris or flour dust can not be regarded with indifference, especially when such inhalation is preventable.

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[a] Cited by Harrington, Practical Hygiene, 1901, p. 664.
[b] Cited by Uffelmann, Handbuch d. Hygiene, 1890, p. 587.
[c] Kompendium der Gewerbekrankheiten, Berlin, 1904, p. 106.

Ahrens([a]) found the amount of dust for each cubic meter of air in certain industrial establishments as follows:

	Milligrams.		Milligrams.
Horsehair works	10	Flour mill	28
Sawmill	17	Foundry	28
Woolen factory	20	Polishing room of foundry	71.7
Woolen factory with exhauster	7	Felt shoe factory	175
Paper factory	24	Cement works	224
Laboratory	1.4		

According to Schuler and Burkhardt, cited by Roth,([b]) the morbidity among 1,000 workmen engaged in dusty occupations is as follows:

Bookbinders	98	Paper factory employees	343
Silk weavers	205	Mechanical industrial shops	419
Cotton spinners	235	Wood turners	427
Printers	250	Laborers in the rag storeroom of a paper factory	479
Cotton weavers	285		
Type founders and typesetters	304		

According to Sommerfeld, cited by Roth,([b]) the mortality in Berlin of persons engaged in nondusty occupations is 2.39 per 1,000; of persons engaged in dusty occupations is 5.42 per 1,000; the mortality of the total population of Berlin at the same ages is 4.93 per 1,000.

Of 1,000 deaths in Berlin the number of deaths from consumption in occupations without development of dust was 381; in occupations with development of dust it was 480; in the total population of the city at the same ages 332.3 deaths of every 1,000 were due to consumption.

METALLIC AND MINERAL DUST.

It will be readily understood that in the cutlery and tool industry, especially in the grinding and polishing departments, more or less dust is evolved not only from the metallic surfaces, but also from the numerous grindstones and emery and corundum wheels. This dust production is not wholly avoidable, even when the wet process is employed. It is known that the inhalation of this dust tends to produce diseases of the lungs, such as bronchitis, peribronchitis, and fibroid pneumonia, but tuberculosis, also spoken of by the workmen as "grinders' asthma" and "grinders' rot," leads the list.

Moritz and Röpke([c]) have shown that 72.5 per cent of the deaths among the metal grinders of Solingen are due to consumption, as compared with 35.5 per cent among the general population.

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[a] Kompendium der Gewerbekrankheiten, Berlin, 1904, p. 106.

[b] Ibid., p. 107.

[c] Ibid., p. 26.

The death returns for 12 years of the city of Northampton, Mass., one of the centers of the cutlery and tool industry, show that among "grinders," "polishers," and "cutlers" diseases of the lungs were responsible for 72.73 per cent of the mortality, inclusive of 54.5 per cent of deaths from tuberculosis.(a)

Hirt gives the percentage of consumption in the total number of sick among different classes of workers in metal as follows: Needle polishers, 69.6 per cent; file cutters, who are also exposed to inhalation of lead, 62.2 per cent; grinders, 40 per cent; nail cutters, 12 per cent.

Greenhow(b) over 50 years ago called attention to the excessive mortality among the needle polishers of Sheffield. Beyer(b) found that of 196 needle polishers at Remscheid only 24 were over 40 years of age. The reason why this occupation is especially dangerous is because the "wet process" can not be employed for small objects, which moreover have to be brought more closely to the eyes, and thus the chances for the inhalation of this metallic dust are increased.

The danger in all such establishments can be reduced to a minimum by the employment of respirators and forced ventilation to carry the dust away from the operator. The Massachusetts report, cited above, states that even when employers have provided hoods, connected with a system of exhaust fans or blowers, "a very large proportion of grinders recklessly remove the hoods, and thus expose themselves unnecessarily to this especially dangerous form of dust. They assert that they prefer freedom of movement, with dust, to the protection offered by hoods."

Stonecutting is regarded as a dangerous occupation, and consumption is quite common among men engaged in the industry. Those who have observed the various operations realize that in spite of wet processes and employment in the open air the workmen, especially those who operate the pneumatic tools, are exposed to a great amount of this irritating form of dust.

A collective investigation published in 1901, and cited by Roth(c) shows that of every 100 deaths among stonecutters, polishers, and quarrymen 86 were due to diseases of the lungs, inclusive of 55 deaths from consumption. Of 2,013 stonecutters examined by Sommerfeld, 19.7 per cent were afflicted with consumption, 17.98 per cent with other diseases of the lungs, and nearly all had a chronic catarrh of the throat or larynx.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 87.

[b] Cited by Sanders, Handbuch der öffentl. Gesundheitspflege, 1885, p. 106.

[c] Kompendium der Gewerbekrankheiten, Berlin, 1904, p. 118.

According to the report of the Board of Health of Massachusetts, previously cited,(a) of 343 deaths which occurred in the city of Quincy, Mass., among stonecutters during a period of about 16 years, 41.4 per cent were due to pulmonary consumption, 12 per cent to other diseases of the lungs, 12.8 per cent to diseases of the heart, 7 per cent to violence, and 26.8 per cent to all other causes.

Millstone and slate cutting are also regarded as dangerous occupations. Persons engaged in glass cutting and polishing are not only exposed to the inhalation of a sharp and irritating dust, but also to lead poisoning from the use of putty powder, which contains 70 per cent of lead oxide. In glass establishments in Massachusetts, where all the cutting and polishing is done by the wet method, no dust is perceptible and the employees as a class appear to enjoy good health.(b) Gem finishers also have a high consumption and sick rate. Workers in mica dust and bronzing powders used in the manufacture of wall papers, fancy souvenir cards, moldings, frames, etc., are predisposed to diseases of the respiratory passages, and the bronze powder in addition is liable to produce headache, loss of appetite, nausea, vomiting, and diarrhea.

It is said of the bronzing department of some of the lithographing establishments in Massachusetts that in spite of the exhaust ventilation the air is heavy with bronze dust most of the time. "The boys who run the five bronzing machines wear handkerchiefs over the nose and mouth. They look pale and unhealthy, and all show the characteristic green perspiration due to contact with bronze. The great majority of the employees appear to be healthy."(c)

In the manufacture of machinery and metal supplies some of the operations involve exposure to dust, fumes, vapors, or extreme heat. In some of the processes emery wheels and revolving wire brushes are used, and unless the wheels are equipped with exhaust ventilating appliances, enormous quantities of fine steel and emery dust are given off. In a Massachusetts investigation covering 24 establishments the air of some of the rooms was found exceedingly dusty, and about one-tenth of the occupants looked pale and sickly and complained of the irritation of the air passages by the dust. The number of employees in these establishments ranges between 12,500 and 15,000. Some of the establishments were models in character as regards light, ventilation, and general sanitation. "The tumblers and emery wheels are provided with hoods and blowers which are effective, and there is practically no dust. The rooms in which castings are dipped are properly

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 79.

[b] Ibid., p. 80.

[c] Ibid., p. 102.

ventilated and all fumes are effectively removed. All of the machinery is well protected."([a])

One brass foundry was reported where the air was heavy with fumes, especially in winter, no mechanical ventilation being installed, and all the workmen asserted that they had occasional attacks of "brass founders' ague." The following may be taken as a fair statement of the hygienic aspects of the machinery and metal industry. "While the nature of some of the processes is such as to warrant classification of this industry with the dangerous trades, the conditions under which the work is done are very largely responsible for the injurious effects on the health of the employees, and these conditions are to a considerable extent avoidable or at least susceptible of improvement."([a])

The same Massachusetts investigation covered 14 iron and steel foundries and 9 stove foundries. In one establishment, the department in which the castings are sand blasted was found very objectionable, as the air was heavily impregnated with flying sand, which "gets into the mouth, nose, and eyes and the employees suffer considerably from soreness of the last-mentioned organs." In another establishment this condition is very much ameliorated by a large flaring hood in the center of the room with upward-suction draft, the operatives wearing helmets with fine wire inserts to protect the eyes and cloths underneath the helmets to protect the nose and mouth. In one of the stove foundries, the dust from the polishing and buffing process, in the absence of hoods and exhaust ventilation, "is so thick that objects a few feet distant can not clearly be made out. Many men refuse to work in this establishment in the hot months on account of the excessive heat and general discomfort." In some instances, where the necessary protection is afforded by the employer, the men habitually remove the hoods and become covered with emery and iron particles.([b])

In the crushing, grinding, and sifting process incident to the manufacture of emery, corundum, and sandpaper more or less fine dust is given off in spite of the fact that the machines are more or less completely inclosed. The emery and corundum industry must be classed among the trades intrinsically dangerous to health, on account of the peculiarly irritating character of dust; "but, as is the case with other dusty occupations, few of those employed can be induced to wear respirators."([c])

Coal miners, charcoal men, firemen, chimney sweeps, etc., are exposed to constant inhalation of coal dust and soot, and though subject to chronic bronchial catarrh, consumption is not especially common among them.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, pp. 81-85.

[b] Ibid., p. 85.

[c] Ibid., pp. 76-78.

VEGETABLE DUST.

Millers and bakers inhale flour dust, and, according to Hirt, 20.3 per cent of all the diseases affecting millers are pneumonia, 9.3 per cent bronchial catarrh, 10.9 per cent consumption, and 1.9 per cent emphysema (abnormal collection of air in the lungs). The tuberculosis death rate, according to Schuler, among millers in Switzerland is 3.75, as compared with 2.95 per 1,000 in the general population. Carpenters, joiners, cabinetmakers, etc., are exposed to wood dust, and the dust from hard wood is probably more injurious than that from softer kinds. Dr. E. J. Neisser ([a]) refers to a wooden-tool factory at Strassburg which in 1904 furnished 15 cases of sickness out of the 20 employees, with 288 days loss of work, 10 cases being as follows—diseases of the eyes, 1; of nose, 1; throat, 2, and diseases of the lungs, 6. The Massachusetts Board of Health found that in the agricultural tool and implement industry a hard wood called "cocobolo," which is used for tool handles, evolves a very pungent and irritating dust, productive of inflammation of the eyes and skin. Some persons, in the course of a week or two, become accustomed to its effects, while others are obliged to discontinue work in the department. ([b])

The medical inspector of Great Britain, according to Neisser, reported a number of toxic symptoms which occurred among persons engaged in the manufacture of weaver shuttles made from African boxwood. Investigation revealed the presence of an alkaloid in the wood, which acted as a heart depressant, producing a slow and intermittent pulse, headache, drowsiness, watering of the eyes and nose, difficulty in breathing, nausea, and weakness.

Laborers in grain elevators and on grain threshers inhale a very irritating dust, which may cause acute and chronic catarrh of the mucous membranes. Workers in tobacco suffer more or less from nasal, conjunctival, and bronchial catarrh and digestive and nervous derangements, and although the mucous membranes gradually become accustomed to the irritation of the dust and fumes the occupation appears to be dangerous, as the consumption rate in the United States ranks next to that of marble and stone cutters.

It is said that female workers in tobacco are more liable to miscarry; at all events Doctor Rosenfeld, cited by Roth (p. 166), found this to be true in Austria. This experience is not confirmed by recent observations made in German tobacco towns like Giessen, for example (Neisser, p. 125), and more extended investigations are called for.

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[a] Internationale Übersicht über Gewerbehygiene, Berlin, 1907, p. 115.

[b] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 89.

Some authors maintain that tobacco dust exerts a protective influence against infective agents and instance the fact that during the cholera epidemic of Hamburg in 1892 there were only 8 cases among the 5,000 resident cigar makers. The Massachusetts report previously cited, in discussing the cigar and cigarette factories in Massachusetts, refers (p. 49) to the spitting habit and the objectionable practice of finishing cigars with the aid of saliva. This practice was observed in more than one-third of the places visited, and in 18 factories the practice of biting off the end of the filler and inner wrappers with the teeth was also observed. The report reiterates the statement made to the legislature in January, 1905, as to the possibility of disseminating loathsome diseases through this practice. Such conditions certainly emphasize the necessity for the use of cigar holders.

Operatives in cotton and flax textiles are perhaps more subject to dust inhalation and various diseases of the respiratory and digestive organs than are those in woolen mills. The phthisis death rate in 1892 in Belfast(a) with its 30,000 persons engaged in the linen industry was 4.1 per 1,000 against 1.5 for the whole of England and Wales and 2.2 for Ireland. According to Schuler and Burkhardt 1,000 linen spinners furnish annually 221.6 cases of sickness, and 1,000 weavers 202.7. Female operatives suffer even more, the sick rate being 249.5 and 334.4 for the respective occupations.

CASES OF SICKNESS PER 1,000 EMPLOYEES AMONG SPINNERS AND WEAVERS.

Disease.	Cases per 1,000 spinners.	Cases per 1,000 weavers.
Diseases of the digestive organs	58.7	103.4
Diseases of the respiratory organs	47.7	52.5
Diseases of the motor organs	29.6	21.2
Diseases of a constitutional character	22.9	31.6

Arlidge(b) gives a table showing the comparative frequency of the most important diseases in the case of 739 weavers and of 676 persons following the several other branches of the cotton industry, such as winders, spinners, reelers, curlers, mill hands, grinders, etc., and who for convenience sake are designated by him as machine-room workers. The figures are based on 1,415 operatives who received treatment as "in" and "out" patients in connection with the Preston Hospital during a period of six years.

(a) G. H. Perris, Journal of State Medicine, London, March, 1895, p. 109.

(b) The Hygiene, Diseases, and Mortality of Occupations, London, 1892, p. 361.

PER CENT OF TEXTILE WORKERS TREATED IN THE PRESTON HOSPITAL DURING A PERIOD OF SIX YEARS, BY DISEASES.

Disease.	Per cent of weavers treated for specified disease.	Per cent of machine-room workers treated for specified disease.
Phthisis	9.87	11.90
Dyspepsia	16.50	21.00
Bronchitis	32.34	31.30
Varicose veins and ulcers	11.23	6.80
Rheumatic affections	7.70	11.68
Uterine disorders and displacements	8.24	8.43
Neuralgia	2.84	4.43
Throat affections	1.89	2.51
Renal diseases	2.57	2.66
Epilepsy	1.49	3.40
Heart diseases	2.71	5.32
Debility	7.57	9.17
Anæmia	2.43	2.50

It will be observed that both the Swiss and English statistics reveal an undue prevalence of the diseases of the respiratory and digestive organs. It has been suggested that the constrained position of weavers is to a large extent responsible for the undue prevalence of dyspepsia among the Swiss weavers, but other factors like improper food, indoor life, and home conditions should be considered. This is apparent from the fact that the percentage of cases of dyspepsia among the English weavers is smaller than among the machine-room workers. The constitutional disorders like anæmia, chlorosis, neuralgia, and debility are likewise due to a variety of causes, chief of which are vitiated air, resulting from defective ventilation of the workshops, overwork, insufficient or improper food, and insanitary homes.

Uterine derangements and displacements may very properly be attributed to general debility, overwork, and long standing in hot and moist workrooms, and, like varicose veins and ulcers and "flat feet," may be expected to develop in other occupations involving long standing. (See occupations involving constrained attitudes p. 522.)

The undue prevalence of pulmonary diseases among the textile operators can be accounted for by a number of factors, such as the presence of very fine cotton or flax dust or "fly"; air vitiated by the products of respiration and combustion, the presence of infectious germs from the promiscuous expectoration habit; faulty life and home surroundings. Of these the presence of "fly" is doubtless a very important predisposing factor, since it is generally admitted that this dust acts as an irritant to the respiratory passages, and sooner or later prepares the way for the invasion of the germs of tuberculosis, pneumonia, etc. Coetsem describes the so-called byssinosis or "pneumonie cotonneuse," but it is by no means settled whether in these cases we have to deal with a typical occupation disease, or with a specific infection, in which the inhalation of the cotton dust simply operates as a predisposing cause. It is very probable, however, that the habitual inhalation of this dust may produce disease of the lungs not necessarily tubercular.

Arlidge says: "If inhaled longer, it reaches the bronchi, and sets up cough with white mucous expectoration. The cough will be for years chiefly a morning phenomenon on first rising, but it is also induced upon leaving the warm workroom. Fine fibers of cotton are found, on microscopical examination, in the sputum, and as these make their way into the pulmonary tissue, they set up morbid action, resulting in increasing density of it on the one hand, and of emphysematous expansion on the other. These morbid changes are accompanied by dyspnœa, wasting, and debility, but rarely with hemoptysis [spitting of blood]; and together constitute a group of symptoms not inappropriately termed 'industrial phthisis.' Moreover, intercurrent diseases of the lungs, such as acute bronchitis and pneumonia, often arise and terminate life; and true tubercular phthisis is no uncommon cause of death."([a])

The chief requirements for the amelioration of existing conditions in the textile industry are efficient machines for the prevention and removal of dust. The utmost care should be taken to provide the most perfect methods so far devised for the removal of dust and for proper ventilation. The lighting should be good, both for day and night work, giving preference to electricity. The temperature and humidity of the rooms should be regulated, and children under the age of 14, or those with weak chests, should not be employed in the cotton mills.

In the textile industry in Massachusetts analysis of the death returns "during the year 1905 from the three principal 'mill towns' shows that although tuberculosis is one of the leading causes of death among mill operatives the general death rate of this class was by no means abnormally high, being, respectively, 7, 8, and 10 per 1,000. Tuberculosis caused, respectively, 32, 23.57, and 21 per cent of the deaths. It appears also that the general death rates of the cities whose populations include the highest percentages of textile operatives compare not unfavorably with those of certain other cities which are engaged in other kinds of manufacture or are more residential in character, in spite of the high rate of infant mortality which appears to be inseparably connected with mill populations everywhere."([b])

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[a] The Hygiene, Diseases, and Mortality of Occupations, London, 1892, p. 360.

[b] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 16.

A source of danger is the presence of infectious dust from dried sputum in the air of different mill rooms on account of the indiscriminate habit of spitting. The number of accidents in textile mills, considering the large number of fast-running machines, is not large. During a period of almost five years at the Pacific Mills, with about 5,200 employees, there were 1,000 accidents, classified as follows:([a])

Accidents to employees of the Pacific Mills, Lawrence, Mass., August 10, 1900, to July 13, 1905.

Killed outright	1
Fatally injured	1
Seriously injured (broken limbs, or amputation necessary)	86
Slightly injured	910
Unclassified (suffered nervous shocks, but physically uninjured)	2
	1,000

The underlying cause of injury is given as follows:

Careless manipulation	539
Deliberate carelessness (taking chances of being injured, such as cleaning machinery while running, etc.)	164
Inattention to surroundings	177
Carelessness of fellow-workman	51
Unforeseen liability	60
Unclassified	9
	1,000

In three mills in Massachusetts devoted to the manufacture of twine, cordage, and gunny cloth from jute and hemp some of the workrooms are reported to be exceedingly dusty in spite of mechanical ventilation and open windows, and "many of the operatives wear thick bunches of fiber over mouth and nose as a protection. A fairly large proportion of the operatives show the effects of their employment, looking pale and sickly." In the room where the sisal hemp is fed into breakers the air is filled with dust. In one of the establishments the employees in all departments look well and strong, although in some parts the air contained considerable dust.

In five Massachusetts carpet and rug factories, employing about 6,000 persons, about 10 per cent of whom are between the ages of 14 and 16, the largest of these factories shows some departments in which poor light, excessive heat, moisture, and dust constitute objectionable conditions. In one room there was "so much fine cotton dust and fiber in the air that it is with difficulty one can see across it. This dust is very irritating to the nose and throat." In one of the establishments the children are described as very small and too poorly developed for their age "to be allowed to work 10 hours and 20 minutes for 5 days in the week." In another factory "about one-tenth of the employees look sickly." The smallest factory employs 500 persons, and is reported as having good light, adequate ventilation, and commendable weave rooms, and the employees appear to be in good health.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 39.

One of the shoddy mills examined was "poorly lighted, inadequately ventilated, dusty, and ill-kept; the other was light, clean, and well ventilated. Some of the women employed appeared to be in poor physical condition." In the six felt-cloth factories examined "the work was found to be conducted in fairly lighted and, apart from dust, adequately ventilated buildings. In each there was more or less dust, especially in the picking and carding rooms; but the amount was much diminished in most of them by means of blower fans."(a)

ANIMAL DUST.

Of the several classes of dust, that from wool is considered to be less irritating than flax or cotton, and horn is believed to be more irritating than bone. The conditions found in some of the woolen mills in Massachusetts as regards light, ventilation, and general cleanliness are reported as far from satisfactory; but in the absence of morbidity statistics it is difficult to determine the degree of danger to which the operatives are exposed. In the boot and shoe industry in Massachusetts, where there is more or less animal dust evolved, some effort is being made to remove the dust by exhaust flues attached to the machinery. Of the 373 factories summarized by the Massachusetts Board of Health Report previously cited, "126 are partially, and a fair proportion of these are wholly, equipped with this means of protection; in 88 of these 126 one or more machines are not so equipped; and in 49 of the 88 there are rooms in which the air, apart from the escaping dust, is noticeably bad. The number of machines with means for efficient or fairly efficient removal of dust was found to be 1,630; the number either inefficiently equipped or devoid of equipment was reported as 2,769. * * * While in general the health of the employees appears to be fair to good, in 85 factories a considerable proportion of them are noticeably pale and unhealthy in appearance."(b) The pale and poorly nourished condition of youthful employees is also emphasized.

The dust and moisture involved in the polishing departments of the horn and celluloid industry, and the irritating fumes given off by a "dip" containing glacial acetic acid, are sources of possible injurious effects to the employees.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, pp. 46-49.

[b] Ibid., p. 59.

In the manufacture of derby and felt hats, apart from the exposure to dust from the fur which comes to the factory clipped from the skin, there is also a certain degree of danger from the cyanide of mercury with which the fur is treated. In two felt-hat factories inspected by the Massachusetts Board of Health, "the employees appear to be healthy." "In some of the establishments visited the fumes of wood alcohol in the drying department were markedly strong. The workmen stated that they are frequently troubled with headaches, vertigo, smarting and burning of the eyes and impairment of vision, and that few can remain at this work longer than three or four months at a time." This could readily be prevented by the use of "denaturéd" alcohol. The "pouncing" process "consists in smoothing off the rough hairs from the hat rim and other parts, and gives off a great deal of very fine dust."([a])

In the brush-making industry hogs' bristles and vegetable fibers are used. In seven brush factories in Massachusetts "the general conditions were found to be beyond criticism and the health of the employees appeared to be fair or good."([b])

Hirt regarded brush making as a dangerous occupation, as nearly one-half of the deaths among the brush makers were from consumption, due probably to the inhalation of the sharp fragments of bristles.

There is no adequate reliable data as to the effects of animal dust given off in the manufacture of woolen goods, silk, feather, fur, hair, horn, bone, shell, ivory, etc. It is reasonable to assume, however, that the dust from all these sources is capable of setting up an irritation and inflammation of the respiratory passages, though not so intensive as that caused by mineral constituents of dust. In the hair, brush, and wool industry there is also some danger from disease germs.

OCCUPATIONS INVOLVING EXPOSURE TO INFECTIVE MATTER IN DUST.

RAG AND PAPER, WOOL AND HAIR INDUSTRIES.

It has been held for a long time that germs of infectious diseases like smallpox, anthrax, scarlet fever, tuberculosis, typhus and typhoid fevers, diphtheria, measles, and cholera may cling to body and bed clothes and prove a source of danger to those coming in contact with rags in the rag business and paper industry.([c]) The danger, while perhaps overrated, is nevertheless real and can be guarded against only by a thorough disinfection of the rags by steam under pressure before they are handled at the paper mills.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 66.

[b] Ibid., p. 72.

[c] The State of Maine requires evidence of successful vaccination in persons employed in the manufacture of paper from foreign or domestic rags.

The occupation is evidently inimical to health. Of 4,857 German operatives reported by Uffelmann, 50 per cent are annually taken sick; about 34 per cent of those engaged in the handling of dry rags suffered from affections of the respiratory passages, and only 21.9 per cent of those otherwise engaged in the same establishments, all of which speaks strongly for the necessity of proper ventilation and exhaust flues for the removal of dust.

In this connection it is proper to refer to the dangers of the so-called "rag sorters'" and "wool sorters'" diseases, which are nothing more or less than anthrax infection—a disease transmissible from animals to man by means of wool, hides, hair, and horsehair. Two hundred and sixty-one cases, with 67 deaths, were reported, according to Neisser, in England from 1899–1904. Of these, 88 occurred among those engaged in the wool industry, 70 cases among persons engaged in curled hair and brush factories, 86 in persons engaged in tanneries and hide trades, and 17 in other industrial pursuits.

About 59 cases of anthrax infection were reported in different parts of Europe during the year 1905. Ravenal reported in three localities in Pennsylvania, during the summer of 1897, 12 cases among men and 60 in cattle, which were traced to a tannery handling hides imported from China. Nichols reported 26 cases occurring in persons employed in a curled-hair factory within three years.

The Federal Government recognizes the dangers by insisting upon the exclusion of rags, wool, and hides coming from districts in which there is a prevalence of cholera, anthrax, and typhus fever and the proper disinfection of such imports at all times. While anthrax is not a very common disease among American domestic animals, local pustular infections and carbuncle are by no means infrequent, and might well be guarded against, as in some of the European countries, where recourse is had to disinfection of the raw material, special blower apparatus for the removal of dust, repeated disinfection of the premises, and prompt treatment of all slight wounds and abrasions.

The material from which paper is made includes rags, burlap, old paper, and wood pulp. The rags are chiefly imported from foreign countries, arriving in a baled condition, and afterward are subjected to a number of processes which clean and disintegrate them. The "beating, or threshing," and "chopping" processes are carried on by machines and are attended by the escape of more or less dust. The quantity naturally varies with the cleanliness of the stock. In the observations of about 80 establishments, the Massachusetts Board of Health found that with the usual grade of stock, no matter what kind of "duster" or "thresher" is used, a considerable amount of dust is also evolved in the "chopping" process, and in spite of exhaust fans and dust pipes some dust will escape. The men engaged in the collection and baling of this dust are usually provided with respirators. "In a majority of the mills visited a portion of the employees are exposed to an excessive quantity of dirt, dust, and lint; and in most of this majority the persons so exposed show not a few who are pale and sickly in appearance." A comparison of the death rates from tuberculosis, pneumonia, and bronchitis at Holyoke, the center of this industry in Massachusetts, with those of the State at large, showed "that the Holyoke rates were under rather than over the average."([a])

OCCUPATIONS INVOLVING EXPOSURE TO POISONOUS DUST.

LEAD DUST.

All occupations in which lead is employed and in which particles of lead may be inhaled, swallowed, or absorbed by the skin must be regarded as dangerous to health. Lead poisoning in its various forms, such as the lead habit, characterized by loss of weight, anaemia, sallow skin, a blue line along the gums, offensive breath, a sweetish taste and diminished salivary secretion, lead colic, lead paralysis, wrist drop, painful affections of the lower extremities, and other grave nervous diseases, is frequently seen in artisans. It attacks persons employed in the roasting of lead ores, in the manufacture of white and red led, acetate and chromate of lead, china and pottery, artificial flowers; also painters, plumbers, varnishers, type founders, typesetters, file cutters, glass and gem cutters, electricians (especially those employed in charging storage batteries), persons engaged in enameling, dyeing, printing, working in rubber goods, weighted silk, and glazing of paper, and many other occupations involving the employment of lead.

Doctor Teleki, of Vienna, in 1906 reported several cases of lead poisoning in females and young girls, contracted in fringe making, the silk having been weighted by a solution of sugar of lead.

Of 999 employees in Prussian lead smelters during the year 1905, 177 suffered from lead colic or lead palsy, involving 3,056 days' loss of work; and of 4,789 engaged in zinc smelters, 50 of the employees, with 2,217 days' loss of work, were thus affected.

In Europe a most marked reduction in the morbidity and mortality has taken place during the past ten years, coincident with the enforcement of preventive measures. The number of cases of lead poisoning in England, where report is compulsory, has been reduced from 1,278 cases in 1898 to 592 cases in 1905. While most of the cases occurred in sugar-of-lead works and potteries, a considerable number were also reported in the other occupations already referred to. The percentage of severe cases in men was 23.9, as compared with 13.9 in females—

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 76.

perhaps because the latter have cleaner habits and possibly also stop work more promptly upon the appearance of the first symptoms.

In Paris it is estimated that over 30,000 persons are engaged in occupations involving exposure to lead, and of the 11,000 painters and varnishers employed there an average of 250 are treated annually in the hospitals for lead poisoning.

File cutters are subjected not only to an irritant dust, but also to lead poisoning, because the file in cutting is being held upon a leaden bed "and particles of lead are inhaled with the dust and may also be absorbed by the fingers in handling the stiddy." In England the mortality figure for plumbism, in 1890-1892, was no less than 75.([a])

The greatest danger in lead works is from inhalation of the lead dust and fumes; hence a special spray apparatus and exhausters have been designed, and employees have been taught to protect their hands with gloves and the mouth and nose with respirators.

In the pottery industry, where the danger arises from the glazes, the flux being made of litharge, clay, and flint, it has been found that the danger can be very much reduced by using only 8 per cent of carbonate of lead in the form of a "double-fritted silicate," instead of the older method, in which from 13 to 24 per cent of lead carbonate was employed.

Smoking should be forbidden during the working hours, and the work should be done in a special suit, frequently washed. The hands, face, and nostrils should be thoroughly washed with soap and water upon cessation of work, and the mouth and throat rinsed with a watery solution of tartrate of ammonia before eating and drinking. The same rules are applicable to painters, who would likewise find it of benefit to soften old paints with an alkali (weak lye) before scraping and to keep the handles of tools clean from deposits.

THE LEAD INDUSTRY IN MASSACHUSETTS.

The report of the Massachusetts Board of Health gives a very complete account of the conditions which obtain in the manufacture of lead compounds in the several factories visited. "The men who attend the grinding machines are of a very different class from those who empty the stacks, and, since they are not exposed to lead dust, they do not suffer from lead poisoning and are comparatively healthy. Those who empty the stacks do not remain long at work. It is said that this is due in part to the disagreeable nature of the work, in part to the fact that they are largely roving characters who do not care to work more than a few days occasionally, and in part to the fact that they acquire lead poisoning and are obliged to quit. Even those of good intention rarely work more than a month."

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[a] Dangerous Trades, Oliver, 1902, p. 138.

One establishment is referred to where white lead is made by the "wet process," with no evolution of dust, and there is no history of lead poisoning. In a "red-lead" factory, also, the general process is commended, especially the absence of appreciable amounts of dust, and the intelligence of the workmen, who are mindful of the dangers and who, with an experience of 6 to 25 years, appear well and strong. In one of the lead-oxide works more or less dust escapes into the air during the transfer to the mill and packing it into barrels. The men wear respirators, and each man washes carefully and changes all his clothes before leaving the establishment. In another establishment "all of the 40 employees appeared to be in good health, and the conditions everywhere were found to be commendable."

In the lead pipe and plumbers' supplies factories the lead fumes are carried away by hoods and exhaust pipes, and in no instance was it possible to trace a case of lead poisoning to faulty methods. All of the employees observed the necessary precautions and appeared to be in good health. In the manufacture of solder the same precautions are employed, and although in the establishment described rats, cats, and dogs appear to succumb to lead poisoning only one case of lead poisoning occurred among the employees in 35 years.

In the pottery industry it is said that lead poisoning is almost unknown in the six establishments visited; only two cases occurred a few years ago in girls who applied the glaze. A possible explanation for this gratifying contrast to conditions observed in French and English potteries may be found in the fact "that the persons engaged in this industry appear to be of good intelligence, and understand thoroughly the importance of care and strict personal cleanliness, and that the employers provide ample means for its maintenance."([a])

Wire and wire-cloth making as carried on in some of the plants visited in Massachusetts appears to be attended, in the opinion of Doctor Hanson,([b]) by "avoidable dangerous conditions." "After the wire is hardened by being run into crude oil, it is passed through kettles of molten lead inside the tempering furnaces, and is then finished and wound for shipment. From the tempering furnaces dense blue fumes arise, and envelop the men whose work it is to feed and tend them. Occasional cases of lead poisoning occur in this department. In one establishment, one of the employees of 5 years' experience shows the characteristic blue line of lead poisoning on the gums; and another, of 14 years' experience, in the same room, has a history of 'wrist-drop' and other evidence of chronic poisoning Efficient mechanical ventilation is most necessary in this work, but it is not always provided."(a)

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, pp. 97-101.

[b] "The effect of industry on health," Boston Medical Journal, No. 14, April 4, 1907, Wm. C. Hanson.

Doctor Hanson, evidently referring to the same factory, writes: "All of the employees in this room worked 11 hours a day and had irregular hours for eating. There were no rules concerning the duties of the employers or those of the persons employed in order to avoid this serious danger. On the contrary, the hoods and blowers and top ventilators for the lead and other fumes were found to be distinctly inefficient, and over one large furnace there was no protection of any sort, the appliances having been broken years before and none renewed, so that all the fumes mingled at once with the air of the room."

In making shingle stains pigments like chromate of lead, zinc oxide, iron oxide, and Prussian blue are used, and in the two establishments visited the men appeared to be careless in the matter of handling the pigments. In the manufacture of paints, colors, and varnishes much of the work is done outdoors by men who have worked from 6 to 20 years; "the man who makes the lead colors has worked 17 years without sickness. The last cases of poisoning at this establishment occurred 16 years ago, when a number of inexperienced men were poisoned with Paris green." In a color and mordant factory where aniline colors, logwood, starch, sodium dichromate, etc., are used, "about one in five of the employees is noticeably pale and sallow," and inflamed eyes were not uncommon. The latter condition is ascribed to the sodium dichromate. In the manufacture of "whiting" about half of the 58 men employed in three establishments visited "looked to be in poor condition."(b)

PRINTERS, TYPE FOUNDERS, AND TYPESETTERS.

The mortality of printers in England is high, being 1,096 per 10,000, as against 953 for all occupied males, and 602 for agriculturists.(c) According to Schuler, of 1,000 Swiss typesetters and founders, 304.7 are annually taken sick, and of printers 250. Diseases of the digestive organs predominate (78 per 1,000). Diseases of the respiratory passages come next (75 per 1,000). Sommerfeld states that among 38 occupations tabulated by him the printers occupy the fifth rank in the number of deaths from tuberculosis. Albrecht reports that the statistics of the Berlin Sick Benefit Insurance Company covering a period of 33 years show that 48.13 per cent of the deaths among printers are caused by consumption.(d)

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 91.

[b] Ibid., pp. 106, 107.

[c] Dangerous Trades, Oliver, p. 151.

[d] Roth, Kompendium der Gewerbekrankheiten, Berlin, p. 56.

This may be due in part to the fact that many weaklings engage in this occupation, but the work itself is often performed in most unfavorable environments and in an impure and dusty atmosphere, which has been found to contain traces of lead, arsenic, and antimony. Special attention should be paid to proper ventilation, and particularly to the collection and removal of dust from the type cases. One gram of this dust has been found to contain 57.7 mg. of lead, 186.8 mg. of antimony, and traces of arsenic.([a]) Strasser has suggested a type case with perforated tin bottom which is placed within another case, so as to facilitate the collection and proper disposition of this injurious form of dust.

A recent study of the "Health of printers," by George A. Stevens, in the Twenty-fourth Annual Report of the Bureau of Labor Statistics of New York, based on the records of the International Typographical Union and the London (England) Society of Compositors, shows clearly the very high death rate from tuberculosis among printers.

The following table gives for the years 1901 to 1905 the annual death rates per 1,000 from the leading causes and from all causes among compositors in certain localities:

ANNUAL DEATH RATE PER 1,000 FROM PRINCIPAL CAUSES AND ALL CAUSES AMONG COMPOSITORS IN CERTAIN LOCALITIES, FOR THE FIVE YEARS, 1901 TO 1905.

[From Twenty-fourth Annual Report of the Bureau of Labor Statistics of New York, 1906.]

Locality.	Death rate per 1,000.							
	Tuberculosis of lungs and other respiratory organs.	Pneumonia.	Diseases of nervous system.	Diseases of genito-urinary system.	Diseases of the heart.	Diseases of digestive system.	Accidents and injuries.	All causes.
New York City	3.82	2.42	1.91	1.63	1.37	0.99	0.89	16.32
Other New York State	2.54	.97	1.49	.70	1.67	.97	.61	11.14
Total New York State	3.48	2.03	1.80	1.38	1.45	.98	.82	14.94
Chicago, Ill	2.42	1.57	1.04	.98	1.44	.45	.72	10.12
Philadelphia, Pa	3.65	.70	2.26	.70	1.39	.52	....	12.35
All other United States	3.38	1.07	1.33	1.02	1.37	.74	.60	12.20
Total United States	3.34	1.30	1.44	1.08	1.39	.76	.64	12.63
London, England	3.69	.67	1.16	.51	1.97	.51	.19	12.19

A second table gives for the same period the per cent of deaths due to tuberculosis in the selected localities for compositors and for all persons 20 years of age or over. It will be seen that in all the localities the percentage of deaths due to tuberculosis is very much higher for compositors than for all persons 20 years of age or over in the same community. For New York State outside of New York City and for London, England, the percentage for compositors is more than double that for the population 20 years of age or over as a whole.

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[a] Rozsahegyi, Archiv. für Hygiene, Munich and Leipzig, vol. 3, p. 522.

PER CENT OF DEATHS FROM TUBERCULOSIS OF THE LUNGS AND OTHER RESPIRATORY ORGANS OF PERSONS 20 YEARS OF AGE OR OVER AND OF COMPOSITORS, IN CERTAIN LOCALITIES, 1901 TO 1905.

[From the Twenty-fourth Annual Report of the Bureau of Labor Statistics of New York, p. cxxv.]

Locality.	Per cent of deaths in					
	1901.	1902.	1903.	1904.	1905.	Five years.
ALL PERSONS 20 YEARS OF AGE OR OVER.						
New York City	17.7	17.7	17.6	16.5	17.4	**17.4**
Other New York State	11.4	10.9	10.6	10.6	10.6	**10.8**
Total New York State	14.5	14.2	14.0	13.6	13.9	**14.0**
Chicago, Ill.	14.9	14.6	14.5	16.0	17.0	**15.4**
Philadelphia, Pa	16.3	15.5	15.8	16.8	15.9	**16.7**
London, England	14.9	13.9	15.3	15.0	13.6	**14.5**
COMPOSITORS.						
New York City	36.5	17.0	18.2	26.6	21.1	**23.4**
Other New York State	29.2	32.3	10.5	21.4	16.0	**22.8**
Total New York State	34.9	20.8	17.1	25.5	20.1	**23.3**
Chicago, Ill.	26.9	28.0	28.6	7.7	33.3	**23.9**
Philadelphia, Pa	43.8	50.0	7.1	13.3	35.7	**29.6**
All other United States	31.1	29.9	24.0	26.0	29.2	**27.7**
Total United States	32.3	27.8	22.2	24.4	27.2	**26.4**
London, England	32.0	26.2	36.4	28.2	29.1	**30.2**

Mr. Stevens, in commenting on the high death rate from tuberculosis among compositors, says: "Scarcely any other occupation furnishes so large a quota of victims from consumption. The domestic life of printers is parallel to that of other artisans in equal financial circumstances. As wages go in these days, they are fairly compensated for their labor, thus enabling them to have homes as healthful as may be procured by the best paid workmen in any community. Neither can it be said that compositors are ill-nourished and therefore rendered more susceptible to the insidious action of tubercle bacilli. The determining cause of their susceptibility to the harmful process of the 'great white plague' lies in a different direction—to the neglect of sanitary precautions in far too many composing rooms."

With proper attention to sanitary conditions in the composing rooms the death rate from consumption could undoubtedly be very materially reduced. The excellent results that have come from improved sanitation in workrooms appear from the mortality statistics for 1905 of the National Organization of Printers in Germany. "The average membership of the union in that year was 44,236, of whom 283, or 6.40 per 1,000, died from all causes, while 134 of the total were affected with diseases of the respiratory system, from which the death rate was 3.03,([a]) tuberculosis not being separated in the tabular presentation."([b])

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[a] The corresponding death rates among compositors in New York City was 7.17; other New York State, 4.04; total New York State, 6.34; Chicago, 4.11; Philadelphia, 5.04; total United States, 5.02, and London, England, 5.50.

[b] Twenty-fourth Annual Report of the Bureau of Labor Statistics of New York, 1906, p. cxxxvii.

The regulations of the Federal Council of the German Empire, which control sanitary conditions in German printing houses (put into effect July 31, 1897), will indicate the means by which such low death rates have been brought about. The regulations are given in full.

I. In rooms in which persons are employed in setting up type or manufacture of type or stereotype plates the following provisions apply:

"1. The floor of workrooms must not be sunk deeper than half a meter (1.64 feet) below the ground. Exceptions may only be granted by the higher administrative authority where hygienic conditions are secured by a dry area and ample means of lighting and ventilating the rooms.

"Attics shall only be used as workrooms if the roof is underdone with lath and plaster.

"2. In workrooms in which the manufacture of type or stereotype plates is carried on the number of persons must not exceed such as would allow at least 15 cubic meters of air space (529.74 cubic feet) to each. In the rooms in which persons are employed only in other processes there must be at least 12 cubic meters of air space (423.79 cubic feet) to each person.

"In cases of exceptional temporary pressure the higher administrative authority may, on the application of the employer, permit a larger number in the workrooms for at the most 30 days in the year, but not more than will allow 10 cubic meters of air space (353.16 cubic feet) for each person.

"3. The rooms must be at least 2.60 meters (8.528 feet) in height where a minimum 15 cubic meters are allowed for each person, in other cases at least 3 meters (9.84 feet) in height.

"The rooms must be provided with windows which are sufficient in number and size to let in ample light for every part of the work. The windows must be so constructed that they will open and admit of complete renewal of air in workrooms.

"Workrooms with sloping roofs must have an average height equal to the measurements given in the first paragraph of this section.

"4. The rooms must be laid with a close-fitting impervious floor, which can be cleared of dust by moist methods. Wooden floors must be smoothly planed, and boards fitted to prevent penetration of moisture.

"All walls and ceilings must, if they are not of a smooth, washable surface or painted in oil, be lime-washed once at least a year. If the walls and ceilings are of a smooth washable surface or painted in oil, they must be washed at least once a year, and the oil paint must, if varnished, be removed once in ten years, and if not varnished, once in five years.

"The compositors' shelves and stands for type boxes must be either closely ranged round the room on the floor so that no dust can collect underneath, or be fitted with long legs so that the floor can be easily cleared of dust underneath.

"5. The workrooms must be cleaned and thoroughly aired once at least a day, and during the working hours means must be taken to secure constant ventilation.

"6. The melting vessel for type or stereotype metal must be covered with a hood provided with exhaust ventilation or chimney with sufficient draft to draw the fumes to the outer air.

"Type founding and melting may only be carried on in rooms separate from other processes.

"7. The rooms and fittings, particularly the walls, cornices, and stands for type, must be thoroughly cleaned twice a year at least. The floors must be washed or rubbed over with a damp cloth so as to remove dust once a day at least.

"8. The type boxes must be cleansed before they are put in use, and again as often as necessary, but not less than twice at least in the year.

"The boxes shall only be dusted out with a bellows in the open air, and this work shall not be done by young persons.

"9. In every workroom spittoons filled with water, and one at least for every five persons, must be provided. Workers are forbidden to spit upon the floor.

"10. Sufficient washing appliances with soap, and at least one towel a week for each worker, must be provided in or as near as possible to the workrooms for compositors, cutters, and polishers.

"One wash hand basin must be provided for every five workers, with an ample supply of water. The wash basin after its use by each person must be emptied.

"The employer must make strict provision for the use of the washing appliances by workers before every meal, and before leaving their work.

"11. Clothes put off during working hours must either be kept outside the workroom or hung up in wardrobes with closely fitting doors or curtains, which are so shut or drawn as to prevent penetration of dust

"12. Artificial means of lighting which tend to raise the temperature of the rooms must be so arranged or provided with counteracting measures, that the heat of the workrooms shall not be unduly raised.

"13. The employer must draw up rules binding on the workers, which will insure the full observance of the provisions in sections 8, 9, 10, and 11. In an establishment where as a rule twenty people are employed these rules shall be inserted in the general factory regulations, in accordance with section 134a of the Industrial Code.

"14. In every workroom a notice must be posted, signed by the local police authority, attesting to the correctness of the statements concerning (a) the length, height, and breadth of rooms, (b) the air space in cubic measure, (c) and the number of workers permitted in each room

"A copy of rules 1 to 13 must be affixed where it can be easily read by all persons affected."

III. Provides for the method of permitting the exceptions named above in sections 2 and 3, and makes it a condition of reduction in cubic air space for each person employed as type founder or compositor, that there shall be adequate mechanical ventilation for regulating temperature and carrying off products of combustion from workrooms.

HEALTH OF EMPLOYEES IN THE GOVERNMENT PRINTING OFFICE, WASHINGTON.([a])

Owing to improved hygienic conditions in modern printing offices, type foundries, and stereotype and electrotype foundries, lead poisoning now exists to a very limited extent among workers in such establishments.

In the Government Printing Office at Washington, where upwards of 4,500 employees are gathered in one building, excellent hygienic conditions prevail. Every ten minutes the air in each room is changed by a very simple device, consisting of air shafts leading from the basement to the roof, which are pierced near the ceiling in each room with suitable openings. A revolving fan placed just below the roof creates a suction, so that a constant supply of fresh air is available at all times.

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[a] This section relating to the "Health of employees in the Government Printing Office" was prepared by Wm. J. Manning, M. D., Chief of the Sanitary Division in the Government Printing Office, and is a reproduction of an article submitted in competition by him for a prize offered by the International Labor Office, Basel, Switzerland. The article was purchased for publication by that office on account of merit.

The electrotype and stereotype foundries are placed on the topmost floor, the modern, rapidly moving elevators making this practicable, so far as the employees are concerned. At that height from the ground currents of air are constantly in motion, with a consequently greater diffusion of the gases than would prevail on floors nearer the ground. In the large newspaper buildings of the various cities in the United States the same idea is being carried out, these rooms being placed as high in the air as possible.

In the type founding and stereotyping trades employees whose duties call them to work over the fumes of the melting-pots are most exposed to the injurious influences of lead, although the large amount of alloy present tends to lessen the danger.

"Finishers" of the plates, who handle only the smooth, hard, bright slabs of the alloyed metal, run the least risk of lead poisoning, because the slabs are free from all oxides and there is little or no dust, the small particles which rub off the plates on the hands of the workmen being in the metallic state and perfectly dry. In contradistinction to this is the case of the painter. Here the lead, being in the form of a carbonate (white lead) and being mixed with such an excellent absorbing material as oil, the danger of lead poisoning is greatly increased.

In type foundries practically the same conditions exist as in electrotype foundries, those who work in the vicinity of the melting-pots being liable to be affected by the toxic vapors which arise therefrom. This is particularly the case where the lead is impure and contains volatile substances which, combining with the lead fumes, might possibly add to the toxic influences of the lead. Hence, in "fluxing" the metal, when wax is employed as the agent, as little as possible should be used.

Females are, as a rule, employed in this country to sort, finish, and pack the type. Here, as with the "finishers" in the electrotype foundries, the metal is bright and free from oxides, besides being largely alloyed; hence the chance of absorption with toxic results is greatly lessened. Doctor Osler has pointed out that the ratio of women susceptible to lead poisoning is small as compared with men. Why they are thus immune is hard to say; but, so far as type founding is concerned, probably the above statement indicates the cause.

With the compositor the chances of absorption of lead from the type metal by the skin is probably nil. Only a small portion of the epidermis of the fingers (the apex of the thumb and forefinger) is brought in contact with the metal both in "distributing" and in "setting," and the epidermis at these parts is in a more or less thickened, dense condition. Thus, the compositor is protected from absorbing the metal, even when the type is covered with the hydrate which is formed by the long-continued action of air and water. It is well known that substances are absorbed but slightly, if at all, through the skin that is in a thickened condition, and since the small atoms which become separated from the metal type in one way and another are in a metallic form the chances of absorption are even more remote.

The danger to the compositor, as with the melting-pot tender, would seem to lie in inhalation. With the former the introduction into the system would be by dust, and with the latter in the form of gas.

When foreign bodies are taken into the system in a state of fine subdivision, the favorite seat will be found, as a rule, in the bronchi and the lungs. The process, so far as compositors are concerned, might be termed "plumbiosis." The dust which is not carried directly into the alveoli of the lungs by the air breathed finds lodgment on the membrane of the bronchi and their ramifications. That considerable dust is carried down the esophagus into the stomach and from there swept out into the intestines is not to be doubted. Might not these fine particles cause the "colic" or active peristalsis by the stimulation of the circular and longitudinal muscular fibers in a mechanical way on the muscles themselves or in a chemic way by a stimulation of the nerves controlling these fibers? This "colic" is one of the first symptoms complained of by the patient.

That the white blood corpuscles play an important part in carrying this finely divided substance throughout the body is also probable, the mode of action being to inclose the fine particles and try to dissolve them, and, failing in that, to transport them to distant points in the body and to the various organs. In that condition known as anthracosis, or coal-miner's consumption, the lung is found to be covered with black dust. The same conditions are found in those suffering from stonecutter's consumption, the absence of carbon rendering the pigment somewhat lighter in color. The condition is known as lithosis. In the knife and saw sharpener's trade the dust is in the form of steel and the consequent disease is known as siderosis. In each case the fine dust finds lodgment in the lungs.

The lungs become so pigmented after long exposure to these conditions, and the alveoli so congested and choked, accompanied by a low form of inflammation that the substances set up, that this, with the unhygienic surroundings and bad ventilation, might explain why so many compositors die each year from tuberculosis. Certainly the tubercle bacilli find a congenial environment in which to begin their fatal work. To the above conditions must be added, of course, the toxic influence of the lead itself, together with the persistent astringent effect of the lead on the air cells. Lead is a very feeble antiseptic and does not seem to inhibit the growth of the bacilli.

The lymph nodes very likely play an important part in carrying the lead through the body to produce plumbism. When lymph nodes become loaded with foreign material of any nature they are apt to break down and the circulation carries the substances to various parts of the body. This would seem to explain the peculiar color of those suffering from plumbism, and it might explain why the kidneys become so irritated and why albumin is found in the urine. Certain tissues seem to have an affinity for the lead thus carried and it is deposited in them. The blue line on the gums, which is pathognomonic of lead poisoning, may be the result of this. It may be that sulphur, which has such a strong affinity for lead and which might be taken into the mouth in articles of food and drink, causes this pigmentation. It is strange that the blue line does not make its appearance on any other part of the body. Certain it is that potassium sulphide when added to a bath will bring out this pigment over the entire body, which remains until the lead in the skin is either eliminated or the affinity is satisfied.

Lead poisoning in the chronic form, as already stated, is very rare among type founders, electrotypers, stereotypers, and in the printing trades in this country. It may present itself in the regular type or the symptoms may be hidden. The characteristic symptoms are the blue line on the gums, and the wrist drop, due to the paralysis of the extensors of the forearms. In some cases it first makes its appearance in anæmia and in a loss of strength. Anæsthesia may appear in spots on different parts of the body, the spots varying in size from that of a half dollar to that of the hand. They may appear on the arms, legs, or on the back. In some cases these symptoms are entirely absent. Albumin may appear in the urine. Doctor Osler describes cases that have come under his care where the symptoms resembled gout and rheumatism. The joints would swell and become very red and tender, the patient suffering all the while intense pain. Doctor Wood mentions cases where the symptoms resembled acute poliomyelitis. In other cases there was simply a failure of health, anæmia, nervous phenomena, etc., the patient having ill-defined, sharp, shooting pains. The pain from the colic seems to radiate from the umbilicus in all instances. Arteriosclerosis has been noticed, with atrophy of the kidneys and hypertrophy of the heart, the enlargement of the latter organ probably being due to its redoubled effort to force the blood through the various contracted distal organs. This contraction may be due, in a measure, to the astringent action of the lead which is noticed upon all tissues when lead is applied in its various forms.

The treatment in these cases may be divided into the preventive and curative, the former relating, of course, only to the trades mentioned in this article. Among the measures which might be taken in the prevention of plumbism in the printing, type founding, and electrotyping and stereotyping trades would be, first of all, the location.

The rooms devoted to the melting of type metal should be situated as high as possible, on the topmost floor of the building, and the ceilings should be at least 10 feet from the floor. Windows should be placed on both sides of the room, so that a current of air may be in constant motion and a fresh supply always on hand. In winter or bad weather a very simple way to obtain fresh air consists in placing a board 3 or 4 inches high lengthwise under the lower window sash. This will enable the fresh air to enter between the lower and upper sashes without causing a direct draft on the workmen. The pots should be covered with iron hoods that will cover the entire top of the melting-pot proper. The hoods should set as near the metal as possible, in such a way that they will not interfere with the manipulation of the ladles or dippers. Hoods with small pipes when used as fume chambers do not answer. It has been found that to be of any service or benefit, the pipe leading from the hood or fume chamber, should be nearly as large as the chamber itself and should lead to a smoke chimney or into the outside air. The heat generated should supply draft enough to carry the fumes off in this way. It might be aided by placing a revolving, circular ventilator in the pipe from the outside to be operated by the wind. The whole thing might be made very cheaply of galvanized iron. Various face masks have been suggested, but none seems to be practical, and after a mask is worn for some time it really becomes a greater danger than if it had not been used, owing to the lack of cleanliness. Cotton and such substances in the nose are useless, because the workman will then breathe through his mouth.

The personal treatment on the part of the workman should be a change of underclothing after work, a bath at least three times a week in hot water with plenty of soap, and at the same time the vigorous application of a flesh brush to the skin. The object here is twofold—to keep the pores free and to remove any particles that may have lodged there, and hence lessen the danger of absorption, while at the same time helping the pores to eliminate that which has been absorbed. The bowels should be kept open by the use of such simple laxatives as sweet oil, castor oil, calomel and soda, etc. An electrotyper who has been in the business for some forty years, and who is now the chief of the largest foundry in the world, informed the writer that it was his custom to take a teaspoonful of sweet oil every other day and that he had never suffered from any ill effects of plumbism.

So far as compositors are concerned the preventive treatment just described would apply to them. The principal danger here is the bad ventilation, insanitary surroundings, and the dust (principally graphite and minute particles of type metal) which becomes detached by the abrasion of the pieces against each other while being handled. To offset this, "cases" should be blown out by a bellows at least once each week; if possible, in the open air. The bottoms in the different boxes, instead of being flat and square cornered and covered with paper, should be slightly concave at the bottom, with the corners rounded, somewhat like a cash till, the idea being to keep the dust from lodging in the corners, where it is difficult to remove even with a bellows. In cases constructed in this manner the dust is, by its own weight, constantly working its way toward the center of each box, where it can easily be removed.

A practical method of removing the caked dust is in vogue in the Government Printing Office at Washington. The type forms after leaving the electrotype foundry are placed on a raised rack which drains into a shallow tank some 6 inches in depth, a pipe connecting this with a sewer. The forms are placed in a horizontal position—that is to say, the side of the chase rests on the rack. Steam under pressure is conducted by a rubber hose and the face of the type is thoroughly "blown," as is the reverse of the form. Later, when the forms are unlocked, the pages are tied up and placed in the "boiling chamber." This chamber consists of a zinc-lined box about 6 feet in length, 4 feet wide, and 4 feet high, a trapdoor at the top being the only opening. In the bottom is placed a coil of steam pipe which covers the entire floor of the box, one end of the pipe being left open. The pages of type are placed on shallow perforated trays somewhat like a "galley," each tray fitting in a copper rack, consisting simply of two loops of copper, somewhat like an inverted U, with pins attached on which the trays set. Each rack holds eight pages, or a "signature," on eight trays. After the box is filled, steam is turned on and the type is thoroughly boiled for an hour or more. The pages are lifted in and out by means of hooks. This method not only removes the graphite, but disintegrates the type and "loosens" it, permitting easy distribution. It also leaves the type very clean and aseptic, lessening the chances of infection by the absence of germs. The method of letting cold water run on the forms and thus cleansing them is not so thorough, because the graphite "cakes" and clings to the type and the dust is thrown into the compositor's case with the type, making the cases very dusty and dirty. Each compositor should supply himself with a small brush, suitable for the hands, to be used each time he washes.

In acute cases of lead poisoning the treatment consists in the administration of alkaline carbonates, soap, soluble sulphates, sodium chloride, etc., washing out the stomach with large drafts of water, etc. Alum has been given, and at one time was considered almost a specific. Sweet oil and castor oil will be found useful. Milk should be taken in large quantities. The idea is first to combat the symptoms and then eliminate the lead. Opium can be given for pain. Warm sulphureted baths are very beneficial. They can be made by dissolving 4 ounces of potassium sulphide in 30 gallons of water in a wooden tub. These baths discolor the skin, from the formation of lead sulphide, and should be repeated every few days until this effect ceases. During each bath the patient should be well washed with soap and water to remove discoloration.

A melting pot is attached to each of the various kinds of typesetting machines, and where many machines are in use, unless there is plenty of pure air constantly entering the room and perfect ventilation provided, the fumes from each pot should be conducted by pipes to a chamber in which there is a vacuum, so that the fumes may be instantly removed and carried out into the atmosphere. The virtue of the machine, so far as health is concerned, lies in the fact of the absence of dust, with the additional advantage that the operator does not lay himself open to exposure in handling the metal to so great a degree as in the case of the hand compositor.

There are other alloys that would take the place of lead in type metal, but owing to the excessive cost and high fusing point their use is not practical.

From a sanitary point of view the collection, cleaning, and disinfection of the spittoons in the Government Printing Office is a matter of considerable importance. This will be readily understood when it is remembered that there are over 4,500 persons engaged during the 24 hours, all working in eight-hour shifts, and that no fewer than 1,200 cuspidors must be cleaned at the end of each shift.

The method now being installed under Doctor Manning's direction effects this without direct digital contact. It consists in a central sterilizing chamber situated in the basement of the Printing Office, with a cement floor, graded toward the center and made up of two inclines and one shallow gutter, i. e., concavity or semilunar groove, in the cement floor under each of six movable iron longitudinal racks extending lengthwise of the room. These racks consist simply of 1-inch angle-iron strips ⅜-inch in thickness, arranged in tiers, 13 inches apart, from which hang suspended at intervals of 9 inches steel-wire spring clutches, secured by a nut and bolt through the eye of the clutch and bolted firmly to the underside of the angle iron. All edges, angles, corners, and returns of the floor are well rounded and each of the four walls has a 12-inch "sanitary base" in order that all parts of the room may be self cleansing and draining. The walls of the sterilizing chamber are composed of white, glazed, vitrified brick.

The wire clutch is shaped somewhat like an inverted letter U, and grasps the cuspidor around the constricted portion or neck when the latter is pressed against the orifice or bell-shaped opening at the bottom of the spring. This spring permits both expansion and contraction around the neck of the cuspidor, and has a sufficient grasp to hold the cuspidor firmly in place while it is subjected to internal and external washing with a stream of hot water from a hose. After thorough cleansing, the cuspidors are subjected to the action of superheated steam, by which all forms of vegetable and organic life are killed, even the most resistant spore-bearing disease germs.

The cuspidors are collected in the workrooms by a mechanical device or holder so designed as to clutch and "nest" at one time five of the soiled cuspidors, one above the other, and are carried directly, by means of the holder, to specially designed wooden, zinc-lined box trucks with detachable sides. Each truck is capable of holding 175 cuspidors for transmission to the sterilizing chamber. As five soiled cuspidors are taken to the truck they are replaced by five sterilized cuspidors picked up and distributed by the same mechanism, all of which is accomplished by the operator by the use of one hand only.

After the trucks are filled they are transmitted from the respective floors to the basement on a freight elevator and wheeled directly into the sterilizing chamber. Here one of the sides of the box truck is removed, and the operator, by the use of another specially designed forceps, reaches out and grasps the lip of a cuspidor, lifts it free, and with a pronation or twist of the wrist empties the vessel. At the same time, with an upward movement, still grasping the forceps, he brings the constricted part of the cuspidor against the bottom of the wire clutch, which receives and holds it in the manner already described.

When the racks have been thus filled the operator faces the front of the racks or mouths of the cuspidors and directs a stream of boiling hot water into and against the cuspidors. The same method is pursued from the rear of each respective rack, and thus a large number of cuspidors are quickly cleaned in a thorough and absolutely sanitary manner.

As soon as this operation has been completed the floor is thoroughly flushed with hot water and all foreign matter is carried into the sewer by means of two centrally located waste outlets protected by a back-pressure valve.

The door of the sterilizing chamber is built on the order of a bulkhead door of a steamer; it is closed with a swivel "keeper" and is steam tight.

For economic reasons an exhaust steam pipe is tapped and a branch carried into the top of the sterilizing chamber. This pipe has a number of apertures on the underside and quickly fills the room with steam, coming from above downward.

The sterilization is continued for one hour at a temperature of about 100° centigrade. At the expiration of this period the steam is turned off and the air shaft leading to the roof opened for the escape of steam and to aid condensation, thus quickly ridding the room of all vapor. The door of the chamber is then opened, and the operator, after the cuspidors have cooled, plucks them from the rack with his hands and proceeds to place layer after layer in trucks until the latter are full.

When a layer is laid in a truck, he pours in a solution made up of bichloride of mercury, 7.3 grains; citric acid, 7.7 grains, to each liter (1.06 quart) of water, colored with fuchsine to differentiate the solution. This gives a strength, approximately, of 1 part of the chemicals to 2,000 parts of water, sufficient to destroy whatever infectious germs may find their way into the cuspidors through expectoration or otherwise.

The bichloride is used for its germicidal power, while the citric acid is added to retard the coagulation of the albumin in the saliva and expectoration and thus render the action of the bichloride of mercury more potent.

The entire cost of the chemical disinfectants named amounts to less than $12 per annum.

The cuspidors are specially designed to permit of easy cleaning and self-draining. Angles which would interfere with the cleaning process have been avoided, and the stream of water will readily reach all the internal surfaces. The constriction or neck is sufficiently wide to permit the stream of the hose to enter with full force. A certain amount of constriction at the neck seemed desirable to hide the contents of cuspidor when in use. They were designed, however, with the special object of easy cleaning and without direct digital contact, because it would seem almost inhuman to ask a cleaner to place his hand, containing even a sponge, in the ordinary stock cuspidor and wash the interior in a thorough and sanitary manner. All of this repulsive work has been avoided, so that by the new method the operator does not touch the cuspidor with his hands until he plucks the washed and sterilized vessel from the rack and places it in the truck.

Hard vitrified china ware has been used to construct the cuspidors, as this is the only material that will withstand the corrosive action of bichloride of mercury and at the same time present a smooth surface for sanitary cleansing.

Approximately about 3,800 barrels of sawdust have been used each year for spitboxes in the Government Printing Office, at a cost of about $100 per month. While, of course, this item will be saved, together with the cost of handling and carting away the foul and polluted sawdust, the main object has been to reduce to a minimum the danger of infection through tuberculous sputa among the employees.[a]

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[a] All the mechanical devices mentioned above were designed by Doctor Manning.

The table following shows the number of cases, both surgical and medical, receiving treatment at the emergency room of the Government Printing Office during the period of 26 months from January 1, 1906, to February 29, 1908:

NUMBER OF CASES RECEIVING TREATMENT AT THE GOVERNMENT PRINTING OFFICE EMERGENCY ROOM FROM JANUARY 1, 1906, TO FEBRUARY 29, 1908.

Character of case.	Year 1906.			Year 1907.			January and February, 1908.		
	Number of cases.	Resumed work.	Sent home	Number of cases.	Resumed work	Sent home.	Number of cases	Resumed work.	Sent home.
SURGICAL.									
Poisoned wounds.									
Right hand	4	4		6	6		2	2	
Left hand	5	5		6	6		7	7	
Left leg	2	2		3	3				
Right leg	1	1							
Right forearm	2	2					2	2	
Left forearm				1	1				
Left foot							2	2	
Sprain:									
Back	2	1	1	4	2	2	2	1	1
Left wrist	3	3		4	4		2	2	
Right wrist	3	3		2	2		3	3	
Ankle	2	1	1	7	4	3	1	1	
Thumb	1	1		1	1				
Incised wounds									
Left arm				1	1		1	1	
Left hand	16	14	2	22	18	4	15	14	1
Right hand	7	7		15	14	1	8	8	
Right forearm	1	1		1	1				
Forehead				1	1				
Burn, first degree.									
Left hand	1	1		5	5		3	3	
Right hand	4	4		2	2		2	2	
Chest	1	1							
Forehead	2	2		1	1				
Right arm	3	3		2	2				
Left forearm							1	1	
Both hands							1	1	
Forehead, scalp, and ear							1	1	
Left foot							1	1	
Burn, second degree:									
Left hand	1	1		3	3				
Right hand	3	3		4	4				
Right arm	1	1		3	3				
Left foot				1	1				
Burn, third degree									
Left hand				1		1			
Punctured wounds									
Right forearm	1	1							
Right foot	2	2		2	2				
Left foot	1	1							
Left hand	8	8		3	3		1	1	
Right hand	9	9		3	3		3	3	
Forehead				1	1				
Scalp							1	1	
Lower lip				1	1				
Contused wounds									
Ribs	1	1							
Left forearm	3	3		1	1		1	1	
Right forearm	2	2		1	1		2	2	
Left hand	16	14	2	12	10	2	4	4	
Right hand	13	13		13	13		1	1	
Right foot	8	8		8	8		2	2	
Left foot				2	2		3	3	
Left leg	4	4		4	4				
Both legs				1	1				
Left shoulder	1	1							
Left elbow, right hand, left knee	1	1							
Face	1	1							
Forehead	2	2		2	2		2	2	
Scalp	5	4	1	4	4				
Lacerated wounds:									
Forehead	2	2		4	4		1	1	
Scalp	2	2		4	4		1	1	
Left hand	13	11	2	20	17	3	11	10	1

NUMBER OF CASES RECEIVING TREATMENT AT THE GOVERNMENT PRINTING OFFICE EMERGENCY ROOM FROM JANUARY 1, 1906, TO FEBRUARY 29, 1908—Cont'd.

Character of case.	Year 1906.			Year 1907.			January and February, 1908.		
	Number of cases.	Resumed work.	Sent home.	Number of cases.	Resumed work.	Sent home.	Number of cases.	Resumed work.	Sent home.
SURGICAL—concluded.									
Lacerated wounds—Concluded.									
Right hand	14	10	4	18	16	2	1	1	
Left leg	4	4		2	1	1			
Right leg	1	1		2	2				
Right forearm	7	7		4	4				
Left forearm				2	2				
External canthus eye							1	1	
Removal foreign body									
Specular lead from hand							1	1	
Splinters, wood, from hand				2	2				
Splinters, wood, from sole of foot	1	1							
Fractures:									
Left patella	1		1						
Third toe, right foot	1	1							
Lower third radius (Colles's) right hand							1		1
Dislocations:									
Left shoulder	1		1						
Right thumb	1	1					1	1	
Left hip							1		1
Strangulated hernia	1		1	1		1			
Burn, cornea, right eye	1	1		2	2				
Burn, cornea, left eye	1	1							
Foreign body in larynx	2	2					1	1	
Acid burn, eye				1	1				
Orchitis (injury)				1	1				
Foreign body in eye	26	26		15	15		10	10	
Total	222	206	16	232	212	20	104	99	5
MEDICAL.									
Diarrhea	27	27		16	16		4	4	
Vertigo	5	5		5	5		3	2	1
Heart failure	8	5	3	[a]5	3	2	3	1	2
Intestinal colic	28	28		23	23		10	9	1
Ptomaine poisoning	2		2	1		1	1		1
Apoplexy	3		3	1		1	1		1
Acute indigestion	9	9		7	7		3	3	
Trifacial neuralgia	17	17		10	10		4	4	
Syncope	24	22	2	16	15	1	10	10	
Cephalgia	15	15		16	16		6	6	
Renal colic	2	2					1		1
Hepatic colic	4		2	4	2	2			
Epistaxis	5	5							
Hysteria	6	6		9	9		6	6	
Odontalgia	4	4		8	8				
Acute gastritis	4	1	3	3		3	2		2
Conjunctivitis	4	4		5	5		3	3	
Asthenia	2		2				2	1	1
Dysmenorrhea	21	21		18	18		5	5	
Monorrhagia	9	7	2	5	4	1	2	2	
Acute myalgia or muscle spasm	5	5		8	8		3	3	
Otalgia	2	2		2	2		2	2	
Acute phlebitis				2	1	1	1	1	
Bronchial asthma (acute paroxysm)	1	1		3	2	1	1	1	
Extreme nervousness	5	4	1	12	10	2	7	7	
Heat exhaustion	5	3	2	3	3				
Retention of urine				1	1				
Nervous prostration	2	1	1						
Convulsions	2	1	1	3	1	2			
Malingering	3	3							
Pseudo angina pectoris	3	1	2	1	1				
Enteritis	4	1	3	2		2			
Intercostal neuralgia	8	8		3	3		1	1	
Tonsilitis (no treatment)	1		1						
Tachycardia	3	3		1		1			
Influenza (no treatment)	3	1	2				3		3
Migraine	4	4		2	2				
Nervous chill	3	3		2	2		2	2	
Nervous collapse	4	2	2	2	2		3	3	
Congestion of lungs				1		1			
Lead colic	4	2	2	5	3	2			

[a] Not including 3 persons who dropped dead from heart failure in 1907.

NUMBER OF CASES RECEIVING TREATMENT AT THE GOVERNMENT PRINTING OFFICE EMERGENCY ROOM FROM JANUARY 1, 1906, TO FEBRUARY 29, 1908—Concl'd.

Character of case.	Year 1906.			Year 1907.			January and February, 1908.		
	Number of cases.	Resumed work.	Sent home.	Number of cases.	Resumed work.	Sent home.	Number of cases	Resumed work.	Sent home.
MEDICAL—concluded.									
Acute pharyngitis	5	5		5	5		1		1
Acute pleurisy	1		1						
Synovitis	2	2					1		1
Gastralgia	7	7		4	4		6	6	
Bursitis				1	1				
Epileptic fit							1	1	
Poisoning							1		1
Uncertain diagnosis	2	2		1	1				
Total	278	240	38	[a]216	193	23	99	83	16

[a] Not including 3 persons who dropped dead from heart failure in 1907.

The above table shows 558 surgical and 593 medical cases, a total of 1,151 cases receiving treatment. There were 4,556 employees in the building.

ARSENICAL DUST.

Arsenic is used in the manufacture of green pigments such as arsenite of copper (Scheele's green) and aceto-arsenite of copper (Schweinfurt or Paris green). These pigments are used in connection with wall paper, box, and card factories, the cretonne industry, and artificial flowers, possibly also in other occupations. White arsenic is also used in the manufacture of shot, preservation of furs, and in taxidermy, and for many other purposes.

In the manufacture of arsenate of lead in Massachusetts no objectionable features were observed. ([a]) Reference has already been made on page 493 to cases of poisoning with Paris green.

One of the factory inspectors of East London reported last year a number of cases of arsenical poisoning in persons engaged in the manufacture of a powder used in a "dip" for scabby sheep. The powder contained arsenic in large amounts and was packed in a dry state in paper boxes. Arsenical dust may be inhaled, but more frequently absorption takes place through the skin, and causes a train of symptoms, characterized by derangements of the stomach, sore mouth, dry tongue, thirst, and a burning sensation in the throat. In the majority of instances the symptoms become chronic, lasting for months and years, and terminating in a general breakdown of the system, preceded by skin eruptions, obstinate ulcers, and inflammation of the peripheral nerves.

In the prevention of injurious effects, special attention must be paid to wet processes; so, for example, the dusting of green pigments in the manufacture of artificial leaves and flowers from a dredging box is wholly unjustifiable. As a matter of fact the use of arsenical pigments should be dispensed with by the substitution of coal-tar colors. The hands should always be protected with rubber gloves and the air passages with respirators, and strict cleanliness of the skin and clothing should be observed.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 104.

OCCUPATIONS INVOLVING EXPOSURE TO IRRITATING OR POISONOUS GASES OR VAPORS.

A large number of occupations involve the inhalation of irritating and even poisonous gases and fumes. The danger may be very much reduced by proper factory sanitation, such as (1) condensation; (2) absorption by water or chemicals; (3) destructive distillation by heat in a closed vessel; (4) combustion of gases that can be burned; (5) forced ventilation and the discharge of gases into the air at a great height. In addition to these precautions much attention must be paid on the part of the operatives themselves to personal hygiene and the use of respirators. Many of the employees in so-called dangerous trades do not always avail themselves of the safeguards offered and are opposed to the use of respirators. Mention is first made of the less injurious but nevertheless irritating gases and fumes, like sulphur dioxide, hydrochloric acid and nitrous fumes, ammonia, and chlorine, which in small amounts cause more or less irritation of the air passages and a tickling cough, while in a more concentrated form they are productive of acute and chronic catarrhs and constitutional symptoms.

SULPHUR DIOXIDE.

This gas is believed to be a blood poison, on account of its affinity for oxygen. It is evolved in smelting works, match factories, and in the manufacture of sulphuric acid. It is also used as a bleaching agent for cotton goods and straw hats and in the preparation of hops and dried fruit. The employees, if not primarily in good health, are said to suffer from respiratory and digestive disorders, heartburn, and pain in the stomach, and are frequently sallow and anæmic. A gradual tolerance may be established, and the danger is very slight if free ventilation is provided. When evolved in the open air, and hence largely diluted, it does not produce any injurious effects, except in very susceptible persons; indeed the people around Vesuvius told Doctor De Chaumont that the sulphur fumes are good for their health.

The Massachusetts Board of Health found that in the straw-hat factories visited in Massachusetts "the employees are exposed to the sulphur fumes only when the doors are opened for the removal of the stock, but they do not enter until the fumes have escaped or have been driven out." The men do not wear respirators in this or the other process of bleaching, which is done by immersion of the stock in a chemical water bath. "The men who were interviewed state that neither process causes anything more than a temporary irritation of the throat, and that many of them have worked in this department for many years."([a])

HYDROCHLORIC ACID.

Hydrochloric-acid vapors are evolved from alkali works and in the pickling process of galvanizing works or otherwise, and, apart from being destructive to vegetation around the immediate vicinity, are also very irritating, and even in small volumes may produce inflammation of the eyes and of the respiratory passages. In a more concentrated form they have produced caustic effects on the tips and edges of the tongue, ulcerations of the nasal wall and throat, bronchial catarrh, pneumonia, difficult breathing, and stupor. Lehmann ([b]) considers the extreme limit to which these vapors may be contained in the air as 1/10 of volume per 1,000. Pettenkoffer,([c]) on the other hand, states that as much as 1 part per 1,000 can be borne by those accustomed to it. The workmen in galvanizing works are also subjected to fumes arising from the sal ammoniac thrown upon the molten zinc. These fumes are to some more insupportable than the acid fumes. Persons with bronchial troubles are often obliged to discontinue the work. In an investigation of three galvanizing establishments in Boston, the Massachusetts Board of Health found that in two the ventilation was efficient and the fumes are rapidly carried off. "The workmen in all three, about 60 in all, appeared to enjoy good health, and asserted that, beyond sneezing and coughing at times, they suffered no inconvenience or discomfort."

SULPHURIC AND NITRIC ACIDS.

The fumes of sulphuric and nitric acids probably produce similar effects. Eulenberg ([d]) believes, however, that the fumes of sulphuric acid produce no special bad effects, because they sink very readily and have a great affinity for the water in the air, so that they reach the system in a highly diluted form. He also points out that the nitrous fumes generated by contact of nitric acid with metals are more injurious, in that they produce a special predisposition to bronchitis, while pneumonia and diseases of the eye have also been attributed to these gases.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., Boston, 1907, p. 114.

[b] Lehmann: Archiv. für Hygiene, vol. 5.

[c] Cited by Harrington, Practical Hygiene, 1901, p. 656.

[d] Handbuch der Gewerbehygiene, Berlin ,1876, p. 143.

The workmen should be instructed to avoid the fumes as much as possible and to anoint the lips and nose within and without several times a day. Protection should be afforded by ample ventilation, and all processes involving the evolution of irritating or poisonous fumes should be carried on in the open air or in open sheds.

According to the Massachusetts Board of Health the corrosive acids are made in such a way that practically no fumes whatever escape, the work being inclosed from beginning to end. In one of the largest chemical factories in Massachusetts, where 300 men are employed, it is said that the workmen "are exposed very little to poisonous or irritating fumes and dust or contact with poisonous or irritating substances. At certain points in the building acid fumes in considerable strength are constantly present, but at these points there is good overhead ventilation, and the workmen are rarely obliged to approach very near."[a]

Among the products of the above-mentioned factory may be mentioned hydrochloric, sulphuric, nitric, and acetic acids, ammonia, sodium sulphite, sodium sulphate, alum, potassium cyanide, ferrous sulphate, and other iron and sodium salts; also various salts of tin, arsenic, antimony, zinc, copper, etc.

AMMONIA.

Ammonia rarely causes any serious disturbance, except a temporary irritation of the respiratory tract, unless present in very large volumes. The amount which may be present, according to Lehmann, should not exceed 0.5 per 1,000. A large volume has been known to cause inflammation of the eyes and bronchial catarrh, while still greater concentrations, which fortunately are rare, may produce difficult breathing and emphysema.

CHLORINE GAS.

Chlorine gas is generally present in the manufacture of chlorinated lime, glazed bricks, and in bleaching operations, and is very apt to produce, when present in the proportion of 1 to 5 parts in 100,000 of air, a cachectic condition, asthma, bronchitis, caries of the teeth, and acne or pimples upon the face, while in a more concentrated form—40 to 60 parts in 100,000—it produces a violent cough and extreme difficulty in breathing.

Hirt describes these attacks as follows: "In spite of the aid of the auxiliary respiratory muscles the entrance of the air to the lungs is insufficient, and the staring eyes, the livid lips, and the cold, clammy perspiration plainly show the mortal agony of the patient. The pulse is small and temperature decreased. These phenomena disappear upon removal to the fresh air, and a few hours later the workman is found enveloped in chlorine and hydrochloric acid vapors in his accustomed place in the factory. The attacks seem to be but rarely fatal, unless the volume exceeds 60 parts per 100,000."

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[a] Report of the State Board of Health of Massachusetts upon Sanitary Conditions of Factories, Workshops, etc., 1907, p. 103.

BLEACHING ESTABLISHMENTS.

The Massachusetts Board of Health, in its summary of five bleacheries, with about 1,200 employees, speaks approvingly of the general arrangements for ventilation and says: "The odors of bleaching powders, although observable in each of the rooms where that substance is employed, were in no case so strong as to be disagreeable or to cause discomfort." In one of the establishments the persons exposed to the lint dust which escapes during unbaling and stitching together of the cotton cloth all looked pale and sickly.([a])

IODINE AND BROMINE VAPORS.

Iodine and bromine vapors may produce toxic symptoms. The fumes of iodine are liable to cause catarrhal conditions of the nose, eyes, and air passages, and frequent headaches, while chronic iodine poisoning produces a cachectic condition, wasting of the testicles, and loss of sexual power. Persons engaged in the manufacture of bromine are said to suffer quite frequently with a form of bronchial asthma, dizziness, and general weakness, while concentrated vapors have been known to produce spasm of the glottis and suffocation.

Bromine preparations are used to a considerable extent in photography. Schuler([b]) describes three cases, one of which proved fatal, in men who prepared "brommetyl" from wood alcohol and sulphuric acid. In all of these three cases there were pronounced symptoms of nausea, spasms, and trembling of the extremities and diminished bodily temperature.

TURPENTINE.

Turpentine vapors in excess may produce gastric and pulmonary catarrh, slow and painful micturition and bloody urine, headache, roaring in the ears, and other nervous symptoms. Schuler observed among the workers in calico printing marked emaciation, loss of appetite, rapid pulse, and more or less headache, which he attributed to the turpentine vapors. Small quantities of the vapor produce no unpleasant symptoms. The odor of violets in the urine is one of the remarkable effects. The use of impure turpentine for cleaning purposes has been known to produce obstinate eczema of the hands.

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[a] Report of the State Board of Health of Massachusetts upon Sanitary Conditions of Factories, Workshops, etc., 1907, pp. 108, 109.

[b] Deutsche Viertelj. f. öff. Gesundheitpflege, Bd. 31, p. 696.

PETROLEUM.

Concentrated vapors of coal oil are said to produce loss of sensation, and the workmen in refineries occasionally show symptoms like those observed in drunken persons, fall into a profound sleep, or suffer from loss of memory, dizziness, headache, and chronic bronchial catarrhs. Pustular, furuncular, and eczematous affections of the hands are also quite common in persons handling this and paraffin oil. The latter is also true of persons handling creosote and tar, unless protected by impermeable gloves. The dangers from explosions in the petroleum industry must also be guarded against.

BENZINE VAPORS.

Dr. Neisser, in 1907, reports an instance where three laborers in a carpet-cleaning establishment in which large quantities of benzine had been used were found unconscious upon the floor and had to be restored by oxygen inhalation. The toxic symptoms are similar to those produced by concentrated petroleum vapors, and the danger from explosions and fire are of course even greater.

CARBON MONOXIDE.

Carbon monoxide, or coal gas, when present in sufficient amount paralyzes, so to speak, the red corpuscles by depriving them of their oxygen and, by combining with the hæmoglobin, results in deficiency of oxygen in the blood and serious toxic symptoms, which may end in death by producing a rapid parenchymatous degeneration of the liver, spleen, and heart. This gas is often present in gas and smelting works and around coke or charcoal furnaces; 0.4 per cent by volume in the air will produce toxic symptoms, and more than 1 per cent is rapidly fatal to animal life. The workmen sometimes, though not so often as is supposed, suffer from the chronic form of poisoning, such as headache, dizziness, slow pulse, anæmia, general debility, and diseases of the respiratory and digestive organs. The acute symptoms of coal-gas poisoning are increased respiration and pulse, violent headache, dizziness, and roaring in the ears. These are soon followed by symptoms of depression, nausea and vomiting, numbness, drowsiness, muscular relaxation, paralysis, sighing respiration, slowness of the pulse and feeble heart action, dilation of the pupils, diminished bodily temperature, and, if continued, convulsions, stertorous breathing, and death by suffocation. If death does not occur, the patient is apt to suffer for some time from headache, physical and mental depression, paralysis of speech and of the sphincters, convulsive twitching, and general muscular weakness, while pleurisy and pneumonia are also frequent.

CARBONIC-ACID GAS.

The chronic effect of carbonic-acid gas has already been alluded to. Well sinkers and miners are occasionally suffocated owing to the presence of a large volume of this gas evolved from the soil and which has collected in deep shafts. It is one of the constituents of the "choke damp" in the mines and also present in cellars. It is also a product of fermentative processes, and the anæmic and debilitated conditions of miners, vintners, distillers, brewers, and yeast makers is believed to be partly due to an excess of carbonic acid, which diminishes the amount of oxygen in the air. The acute symptoms are loss of consciousness and locomotion, generally preceded by difficulty in breathing, headache, depression, drowsiness or mental excitement, and sometimes convulsions. Prompt removal of the patient into fresh air will lead to rapid recovery.

CARBON DISULPHIDE.

Carbon disulphide is used in certain processes in the manufacture of vulcanized india rubber and also in the extraction of fats, and may produce in those constantly exposed to it headache, dizziness, impaired vision, pains in the limbs, formication, sleeplessness, nervous depression, loss of appetite, etc. Sometimes, according to Delpech and Hirt, there is cough, febrile attacks, deafness, difficult breathing, loss of memory, paralysis of the legs and lower part of the body, and loss of sexual power, which has been preceded by increased sexual appetite and mental exaltation.

NAPHTHA.

Naphtha is used in the same industries, and it is not improbable that the symptoms are produced by the combined influence of the two fumes. At all events, there are a number of authenticated cases of acute naphtha poisoning characterized by dyspnœa, dizziness, and mental confusion, with vomiting, palpitation of the heart, and hemorrhages in the fatal cases. Necropsies reveal evidence of fatty degeneration of the heart, liver, kidneys, and other parts. The cleaners of woolen goods, etc., with naphtha not infrequently suffer from dizziness, nausea, vomiting, headache, sleeplessness, hysteria, and symptoms resembling alcoholic intoxication. (See also page 515.)

NITROBENZOL.

Nitrobenzol, which is used in making aniline and in the manufacture of roburite and other explosives, produces headache, dyspnœa, drowsiness, dizziness, nausea and vomiting, great depression, and stupor, and often causes death.

The majority of workers in dinitro compounds in Great Britain ([a]) are anæmic and suffer from difficulty in breathing and general weakness. They are subject to a *biweekly medical inspection* and are enjoined (1) not to touch these compounds with bare hands; (2) to keep the feet in good condition, (*a*) by bathing, (*b*) by shoes in good repair; (3) to avoid alcoholic beverages, and (4) to thoroughly wash their hands before eating and to change their clothing upon quitting work.

DYEING AND CLEANSING.

Among the chemical substances employed are naphtha, gasoline, wood alcohol, ammonia, various acids, bleaching agents, iron, copper, and other salts, aniline dyes and other dyestuffs.

The Massachusetts Board of Health reported of one large establishment investigated:

"In the naphtha-cleansing department, * * * [in spite of mechanical ventilation], there is a strong odor of naphtha, and all of the men here employed are pale and some of them very markedly sick looking. In the room in which the naphtha-cleansed goods are dried, at a temperature of about 120° F., the naphtha fumes are very strong. Although the men who bring in the goods remain but a few minutes, some have occasionally been temporarily overcome by the fumes and have shown the characteristic excitement and hysterical symptoms of naphtha intoxication. At the time of visit, the man who does most of this work had been engaged thereat for three months and had experienced no ill effects." ([b])

RUBBER INDUSTRY.

Fourteen rubber factories with about 9,000 employees, also, were investigated by the board. It appears that naphtha has to a great extent replaced the more dangerous carbon disulphide as a vulcanizing agent, and in 11 of the factories visited the odor of naphtha was noted as only slight. "In two factories it was stated that a few girls, new to the work, show the effects of naphtha and suffer from headache and sometimes nausea and vomiting, but that such girls do not long continue at the work. Naphtha fumes sometimes bring about a condition which much resembles alcoholic intoxication, and which occurs most often in the room where rubber is spread upon cloth. New men are especially susceptible, but even old hands have sometimes to leave their work at times for a breath of fresh air." In six factories litharge is handled, but there could be obtained no history of any case of lead poisoning. It was stated that cases occur in two of the factories, but not often. All of the establishments, with one exception, were found to be well lighted and adequately ventilated.([a])

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[a] Cited by Neisser, 1907, p. 79.

[b] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 110.

PATENT-LEATHER INDUSTRY.

The fumes of naphtha, amyl acetate, and wood alcohol which are given off in the manufacture of patent leather are dangerous. While no exact data are available, it is admitted by those in authority that many employees can not do the work on account of inability to withstand their influences.

ANILINE VAPOR.

Aniline vapor is dangerous to health when present in the air to the extent of 0.1 per cent. Hirt thus describes an acute form of poisoning from aniline vapor, which usually results fatally: "The workman falls suddenly to the ground, the skin is cold and pale, the face is cyanotic (bluish discoloration of the skin), the breath has the odor of aniline, the respiration is slowed, and the pulse increased. The sensation diminished from the beginning of the attack, gradually entirely disappears, and death follows in a state of profound stupor."

The milder forms are characterized by laryngeal irritation, loss of appetite, headache, giddiness, and weakness, with a rapid, small, and irregular pulse, and diminished sensibility of the skin. In some instances short convulsions have occured. Prompt fresh-air treatment is absolutely essential.

The chronic form of aniline poisoning may affect the central nervous system and cause lassitude, headache, roaring in the ears, motor or sensory disturbance, or it may produce digestive derangements such as eructations, nausea, and vomiting, or it may affect the skin by causing eczematous or pustular eruptions and even well-defined ulcers. Doctor Neisser (1907) reports a number of such cases in aniline factories and in dyeing works.

The medical inspector of Clayton, England, has presented a very interesting report([b]) on the effects of aniline oil in black aniline dyeing works, and also the effects upon the skin of chromic acid and the bichromates of potassium and sodium in these establishments. He visited 20 establishments and examined 200 employees, many of whom suffered from anæmia, headache, digestive derangements, heartburn, dizziness, palpitation of the heart, loss of will power, and excessive mucous secretions, all of which were attributed to the toxic effects of aniline. He recommends as safeguards: (1) Mechanical, suctional ventilation (*a*) at the machines where the cloth is being dyed, (*b*) at the machines where the cloth passes through the bichromate solution, and (*c*) at such points where there is danger from the chromate dust; (2) protective clothing, and the frequent cleansing of the same, the provision of lockers, and dressing rooms for street clothing; (3) special lunch rooms; (4) suitable wash rooms.([a])

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops, etc., 1907, p. 113.

[b] Internationale Übersicht über Gewerbehygiene, Berlin, 1907, p. 75.

WOOD ALCOHOL.

Vapors from varnishes have been known to produce blindness, due to inflammation of the nerves behind the eyeball, and partial atrophy of the optic nerve. Similar effects follow the internal use of wood alcohol, and even fatal cases have been reported in consequence of its substitution for the pure alcohols. Doctor Neisser (1907) reports a large number of eczematous affections of the hands, arms, and face in furniture polishers ("polisher's itch"), which may possibly be caused by some of the impure alcohols.

CHROME PIGMENTS.

In the manufacturing and handling of chrome pigments, as in tanneries and various leather industries, a dust or vapor is evolved which causes inflammation of the eyes and even ulceration of the nasal septum and elsewhere.

QUININE.

Quite a large percentage of the persons employed in the manufacture of quinine suffer from a dry form of eczema of the hands and face, which is claimed to be directly due to emanations from the boiling solution, since the disease disappears if the work is given up.

In the so-called "polisher's itch" and in the effects produced by chrome and quinine the use of rubber gloves and the anointment of the skin with some clean oil or grease have been found most useful.

MANGANESE.

According to Doctor Neisser (1907) a small percentage of the workers in manganese mills and in the manufacture of dry pigments are affected with headache, dizziness, loss of appetite, constipation, loosening of the teeth, muscular pains, and general debility.

BRASS FOUNDERS.

The workers in brass foundries inhale a metallic dust or vapor of zinc or copper, or perhaps of both, which has given rise to a train of symptoms described as "brass founders' ague." The illness attacks about 75 per cent of those who are new to the work, or who resume work after an absence of a month or even a fortnight. There are more or less severe pains in the back, and general lassitude, which compels the patient to seek his bed. Usually after he has taken to his bed chilliness comes on, increasing to a decided rigor and lasting 15 minutes or longer. In the course of an hour or less the pulse beats from 100 to 120 per minute, accompanied by a tormenting cough, corresponding headache, and soreness in the chest. After the lapse of a few hours free perspiration indicates the disappearance of the fever and the patient falls into a deep sleep, from which he awakens with perhaps only a slight headache and lassitude. In England the men who suffer this way drink freely of milk and promote vomiting—perhaps the best treatment for copper or zinc poisoning. A chronic form of zinc or copper poisoning, characterized by oversensibility, formication, and burning of the skin of the lower extremities, tactile and motor disturbance, anæmia, cough, headache, neuralgia, digestive disturbance, and progressive emaciation, is said to occur among men who have worked for a number of years in brass foundries. At present it is not possible to say whether the symptoms of brass founders' ague are due to the copper, zinc, or arsenic, or to a combination of all three. Some authors believe it to be a specific infection.

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[a] Internationale Übersicht über Gewerbehygiene, Berlin, 1907, p. 74.

ARSENICAL FUMES.

Arsenical fumes are frequently given off in smelting processes, especially copper works, and, like those of arseniureted hydrogen, may give rise to jaundice, headache, nausea, stiffness of the joints, general anæmia, discomfort, and malnutrition. When inhaled in concentrated form the fumes produce symptoms of nausea, vomiting, languor, drowsiness, rapid pulse, frequent micturition, and bloody urine. In serious cases the pulse becomes small and thready, the skin cold and clammy, and death ensues with evident signs of cardiac paralysis.

MERCURY.

The most important of the poisonous vapors in connection with dangerous trades are mercury and phosphorus. Workers in mercury suffer greatly from the effects of mercurial poisoning, such as salivation, tremor, and nervous symptoms, and many fall victims to pulmonary tuberculosis. Miscarriages among the female employees are very common. These effects, according to Renk,(a) are due to the inhalation of mercurial vapors in badly ventilated workshops, while Wollner attributes them to the inhalation and swallowing of fine mercurial dust. Of 7,221 mirror makers at Furth during the year 1883 no fewer than 2,457, or 34 per cent, were taken sick, and of these 60 per cent suffered from mercurial poisoning. This danger has been practically eliminated in the mirror industry, but it is still

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[a] Arbeiten aus dem kaiserlichen. Gesundheitsamte, V, p. 118.

pronounced in the manufacture of felt, thermometers, barometers, dry electric batteries, and bronzing. In Europe persistent efforts are being made to reduce the danger in these industries to a mimimum, and some of the felt establishments no longer use the preliminary treatment of the hair with mercuric nitrate. The 64 cases reported in Great Britain in 1906 from May, 1899, to December 31, 1905, and cited by Neisser, occurred as follows: Manufacturers of electric meters, 17; thermometers, etc., 16; felt and fur industry, 13; gilding, 7; chemical works, 7; powder works, 3; lithography, 1.

As preventive measures may be mentioned the following: (1) Change of clothing before and after work; (2) weekly washing of the working clothes; (3) systematic and frequent washing of the hands, weekly sulphur baths or frequent general baths, and at the close of work gargling with a solution of permanganate of potassium; (4) limit of work to eight hours per day and thorough ventilation of the rooms—open doors and windows; (5) frequent cleaning of floors with damp sawdust and sprinkling with a solution of ammonia.

PHOSPHORUS.

In the manufacture of phosphorus matches white and red phosphorus have been used. The danger consists in the inhalation of the fumes when the white substance is used, while the red or amorphous phosphorus is neither poisonous nor easily inflammable. The gas smells like garlic. The toxic symptoms in the acute form are difficult breathing and a feeling of intense anxiety. The fumes are given off only when the air contains moisture. The milder effects of phosphorus consist of gastric and bronchial catarrhs, anæmia, and malnutrition, followed occasionally by a painful inflammation of the bones of the lower or upper jaws, due to the local action of the phosphorus, and often beginning in carious teeth or in the alveolar process of missing teeth. The disease may develop during the first months, but generally not until four or five years after the beginning of the employment, and carious teeth, with toothache, are among the first symptoms, followed by swelling of the glands of the neck, alveolar abscesses, and necrosis of the jaws. Formerly from 11 to 12 per cent of the employees suffered. Since the use of red or amorphous phosphorus the danger has been greatly reduced. Only about 2 per cent of the operatives are now attacked.

Doctor Neisser reports that during the year 1906 several cases of phosphorus necrosis occurred in German match factories, in which the use of white phosphorus was promptly stopped.

The medical inspectors of Great Britain, from October 1, 1900, to October 1, 1905, reported only 11 cases of phosphorus necrosis, the reduction being attributed to improved factory sanitation.

The medical inspector of Belgium (quoted by Doctor Neisser, page 71) reports that during the last six years only one case of necrosis occurred, and the morbidity of the employees in match factories has also decreased coincident with factory sanitation, as shown by the following figures:

EMPLOYEES EXAMINED AND CASES OF SICKNESS AND DEATH IN MATCH FACTORIES OF BELGIUM, 1903 TO 1905.

	1903.	1904.	1905.
Number of employees examined	1,144	1,182	1,226
Number of monthly examinations	7,051	8,511	9,005
Number of apparently healthy employees	757	1,055	1,061
Number of sick employees	387	127	165
Number of deaths	401	132	(a)

[a] Not reported.

The use of respirators, thorough ventilation, the disengagement of turpentine vapors to promote rapid drying, and strict cleanliness, such as ablution of the hands, change of clothing, and gargling with weak alkaline solutions before eating and drinking, are still in order as preventive measures.

BEET-SUGAR INDUSTRY.

In the beet-sugar industry, especially when the diffusion method is employed, an explosive mixture containing probably carbureted hydrogen has proved a source of danger to the operatives, and the waste waters are believed to be also a menace to public health.

OCCUPATIONS INVOLVING EXPOSURE TO EXTREMES OF HEAT, SUDDEN CHANGES, AND ABNORMAL ATMOSPHERIC PRESSURE.

Exposure to extremes of heat and sudden changes is injurious and predisposes to a number of diseases. Stokers, cooks, bakers, blacksmiths, firemen, etc., are very apt to suffer from heat exhaustion and thermic fever (sunstroke). The duration of life is low, and rheumatism, eczema, catarrhal affections, pneumonia, and diseases of the heart are quite common. Sailors, farmers, motormen, conductors, teamsters, coachmen, and many others are often exposed to sudden changes in the weather, and suffer frequently from rheumatism, catarrhal affections, pneumonia, and Bright's disease.

The effects of both heat and cold are intensified by extreme humidity in the atmosphere, and special precautions are necessary upon hot and sultry days and in cold, raw weather. Occupations involving exposure to dampness, especially when performed indoors, are injurious, because a cold, damp air abstracts an undue amount of animal heat from the body, lowers the power of resistance, and predisposes to catarrhal and rheumatic diseases. It is a well-known fact that damp houses favor the development of consumption. (See pages 543, 550.)

CAISSON DISEASE.

The effects of compressed air on workmen in tunnels, caissons, deep mines, and diving bells were formerly attributed solely to increased atmospheric pressure, in consequence of which it was believed that the blood received not only an excess of oxygen, but by reason of the abnormal pressure was driven from the surface to the internal organs, causing congestion, especially of the central nervous system. It is now held that, while increased atmospheric pressure is capable of producing characteristic effects upon the circulation, such as pallor of the skin, ringing in the ears, bulging and possibly rupture of the ear drums, the most serious symptoms are produced when the pressure is too rapidly increased or removed by a faulty method of "locking in" and "locking out."

A commission of Belgian medical experts examined 166 caisson workers before and after their work, the shift lasting from 8 to 12 hours, and found (1) that the blood-making function, as shown by the hæmoglobin contents, was actually increased during their work; (2) that so long as the pressure does not increase beyond 3 atmospheres (45 pounds) the men feel perfectly well and perform their labor with more ease and even less fatigue than under normal atmospheric pressure; (3) that men of temperate habits, with a sound heart, lungs, and nervous system, suffer no injurious effects, and none others should be employed; (4) the real injury is done by a sudden removal of atmospheric pressure in a hasty "locking-out" process, for which the workmen are often to blame.

The general rule in "locking out" should be to allow at least one minute for each 6 pounds of pressure within the chamber.

The symptoms of so-called caisson disease are rarely observed until the pressure equals 20 pounds, and usually do not appear for some minutes or hours after emerging. In addition to the symptoms already mentioned, there may be hemorrhage from the nose, mouth, and ears; headache, dizziness, rapid pulse, sweating, severe pain in the back, extremities, or region of the stomach, and vomiting. Partial deafness and symptoms of motor paralysis, more or less general, but most frequently confined to the lower extremities, are frequently observed. Cases with pronounced head and spinal symptoms usually prove fatal. The milder cases, as a rule, recover sooner or later, although the muscular pains and paralytic symptoms may persist weeks or even longer.

OCCUPATIONS INVOLVING CONSTRAINED ATTITUDES.

The effects of a constrained position, combined with a sedentary life, are very injurious. This is especially seen in weavers, shoemakers, engravers, watchmakers, tailors, lithographers, etc., all of whom are obliged to assume a more or less constrained attitude, which interferes with a proper distribution of the blood supply and is liable to be followed by internal congestions. But perhaps the greatest harm results from deficient movement of the chest and consequent interference with normal respiration. As a matter of fact, many of these artisans suffer from phthisis, constipation, dyspepsia, and hemorrhoids, and all have a low average duration of life.

Among the apprentices of bakers, deformities such as "flat foot" and "knock-knee" and varicose veins of the lower extremity are frequently seen, as the result of being on their feet too long. Varicose veins and ulcers are quite common among motormen and conductors, while bakers, cabinetmakers, and others are also very liable to develop abnormal curvature of the spine.

OCCUPATIONS INVOLVING OVEREXERCISE OF PARTS OF THE BODY.

Among the diseases due to the excessive use of certain muscles may be mentioned the affection called "writer's cramp," which is a convulsive affection of the fingers. Similar fatigue neuroses, characterized by localized paralysis and twitching, are observed in copyists, typewriters, telegraph operators, pianists, violinists, engravers, seamstresses, cigar makers, etc.

Pulmonary emphysema is quite common among performers on wind instruments. Boiler makers' deafness and mill operatives' deafness may also be mentioned. The former is believed to be due to constant exposure to an atmosphere in a state of violent vibration, while the latter affection is characterized by an inability to hear distinctly except during a noise. Public speakers and singers are apt to suffer from chronic affections of the throat and paralysis of the vocal cords, and watchmakers, engravers, and seamstresses, as well as all others who use their eyes upon minute objects, are liable to suffer from nearsightedness and other visual defects.

Tobacco testers frequently suffer from nervous symptoms and serious visual defects, and tea tasters soon become the victims of muscular tremblings and other nervous symptoms, the result of a chronic "thein intoxication."

OCCUPATIONS INVOLVING EXPOSURE TO MACHINERY, ETC.

Life insurance and accident statistics plainly indicate the danger of occupations which involve contact with machinery. This may be the result of individual carelessness or the negligence of others. Not infrequently accidents are the result of boiler explosions, circular saws, belting, and flying fragments, and are due to a lack of proper safety devices. As might be expected, many of the accidents befall children and inexperienced persons and take place at night or in badly lighted establishments. According to Rubner,([a]) of 100 accidents, 41 befell children under 15 years of age, 36.4 befell persons between 15 and 25 years of age, 13.1 befell persons between 25 and 40 years of age, and 9.5 befell persons between 40 and 60 years of age. The upper extremities were involved in 87 per cent of the cases, the lower extremities in 7.5 per cent, and the head and trunk in 5.5 per cent. During the year 1899 there were in English factories "301 fatal and 19,321 nonfatal accidents, all attributable to machinery moved by mechanical power."([b])

According to Swiss statistics the number of accidents per 1,000 workingmen in various occupations were as follows:([c]) Cotton spinners, 22.2; millers, 28.0; paper manufacturers, 31.1; carpenters, 35.2; locksmiths, 46.9; brewers, 66.7; masons, 80.5; blacksmiths, 93.1; metal workers, 102.1; molders, 132.2.

Many of the accidents to metal workers, masons, miners, weavers, etc., befall the eye, and Magnus attributes 8.5 per cent of all cases of blindness to accidents.

Of 48,262 accidents among British miners from 1884 to 1898, not less than 2,506, or 5.19 per cent, affected the eye.([d])

COAL MINING.

The mining of coal is, even under the best conditions, one of the most dangerous industries. A report of the United States Geological Survey([e]) shows the number of men killed for each 1,000 employed in the United States and in the four leading European countries, the figures being averages for five years:

AVERAGE NUMBER OF MEN KILLED FOR EACH 1,000 MEN EMPLOYED, BY COUNTRIES, FOR FIVE-YEAR PERIODS.

Country.	Period.	Number.
United States	1902 to 1906	3.39
Prussia	1900 to 1904	2.06
Great Britain	1902 to 1906	1.28
Belgium	1902 to 1906	1.00
France	1901 to 1905	.91

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[a] Lehrbuch der Hygiene, 6th Edit. Leipzig and Wien, 1899–1900, p. 701.

[b] Dangerous Trades, Oliver, p. 203.

[c] Bergey's Principles of Hygiene, 1904, p. 276.

[d] Dangerous Trades, Oliver, p. 776.

[e] Coal-Mine Accidents: Their Causes and Prevention. A Preliminary Statistical Report. United States Geological Survey, 1907.

The following table from the same report shows the number of deaths from accident for every million tons of coal mined:

NUMBER OF MEN KILLED IN COAL MINES PER MILLION TONS OF COAL PRODUCED, BY COUNTRIES, 1902 TO 1906.

Year.	United States.	Great Britain.	Belgium.	France.
1902	6.70	....	6.29	4.80
1903	5.62	[a] 4.70	6.68	4.20
1904	6.24	4.41	5.66	4.55
1905	5.97	4.64	5.64	4.17
1906	5.57	4.31	4.96	([b])

[a] Average, 1894 to 1903.

[b] Not reported.

The fatal and nonfatal accidents in the coal mines of the United States in 1906 for which causes were reported were as follows:

NUMBER OF PERSONS KILLED OR INJURED BY COAL-MINE ACCIDENTS IN THE UNITED STATES, BY CAUSES, 1906.

Accidents due to—	Persons killed.	Persons injured.
Gas and dust explosions	228	307
Powder explosions	80	215
Falls of roof and coal	1,008	1,863
Other causes	732	2,192

An exhaustive analysis of mining accidents in the German Empire will be found in the Statistik der Knappschafts-Berufsgenossenschaft für das Deutsche Reich, Berlin, 1897. The total number of persons insured for one year during the period covered (October 1, 1885, to December 31, 1894) by the work was 3,623,175; the total number of accidents of all kinds notified was 278,371, distributed as follows:

TOTAL NUMBER OF ACCIDENTS OF ALL KINDS REPORTED IN THE GERMAN EMPIRE, OCTOBER 1, 1885, TO DECEMBER 31, 1894

Class of accidents.	Number.	Per 1,000 persons employed.
Fatal accidents	7,721	2.13
Accidents causing total permanent disability	1,427	.39
Accidents causing partial permanent disability	14,367	3.97
Accidents causing temporary disability	8,164	2.25
		8.74
Minor accidents	246,692	68.09
Total	278,871	76.88

The causes of the fatal and serious accidents as calculated per 1,000 employees are given as follows:

Falls of rock, coal, falling bodies, etc	3.44
Transport, haulage, winding, loading, etc	2.26
Falls from ladders, steps, or other heights	.89

Explosions	.78
Machinery in motion, motors, etc	.51
Molten metal, hot and corrosive fluids, poisonous gases	.12
Miscellaneous	.74
Total	8.74

Mr. Henry Louis, in commenting upon these statistics in Oliver's Dangerous Trades, page 516, says, "41.6 per cent, or two-fifths, of all the accidents could have been avoided by proper care and intelligent thought on the part of all concerned, and, in the second place, fully one-third of the accidents can be ascribed to the faults of the victims themselves."

According to the Revue Scientifique for 1875 ([a]) there had been during 50 years 503 mine explosions in Europe, with a loss of over 5,000 lives.

The number of men killed in the coal mines of the United States is appalling, amounting to 22,840 during the 17 years ending with 1906. In 1906 the total number killed was 2,061 and the number injured was 4,800.

In the introduction to the preliminary statistical report of the United States Geological Survey, already cited, Mr. Joseph A. Holmes says: "The figures given in this report indicate that during the year 1906 nearly 7,000 men were killed or injured in the coal mines of this country, and that the number of these accidents caused directly or indirectly by mine explosions has been steadily increasing. * * * The increase both in the number and in the seriousness of mine explosions in the United States during past years may be expected to continue unless, through investigations made in the United States such as have proved effective in other coal-producing countries, information can be obtained and published concerning the explosives used, the conditions under which they may be used safely in the presence of coal dust or gas, and the general conditions which make for health and safety in coal-mining operations." ([b])

According to English data, cited by Frederick L. Hoffman (Quarterly Publications of the American Statistical Association, December, 1902, page 178, note), "for the period 1890-1892, at ages 45-54, the general death rate of all miners was 19.6 per 1,000, and of quarrymen 25.3 per 1,000. For coal miners alone the death rate at this age period was 19.4; for copper miners, 24.3; for tin miners, 33.2, and for lead miners, 23.9 per 1,000—indications of quite considerable differences in the mortality and specific disease liability of men engaged in the mining of coal and the different metals."

While tuberculosis is comparatively rare among coal miners, anthracosis (a lung disease produced by coal dust—"black lung"), miner's asthma, which is really a chronic bronchitis with emphysema, and simple chronic bronchitis are common affections. These diseases are largely influenced by defective ventilation, for Greenhow has shown that among the operatives of well-ventilated mines there is no excess of pulmonary diseases.(a)

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[a] II, page 765.

[b] Page 4.

Apart from large quantities of dust, the air of mines contains putrefactive gases from decomposing excrementitious matter and products of combustion, especially carbonic-acid gas, which is also one of the constituents of the "choke damp." In addition to all this, the "fire damp" (an explosive mixture of carbureted hydrogen with atmospheric air in the proportion of 6 to 10 volumes per 100) and the excessive temperature, real hard work, constrained attitude, and careless use of explosives add very greatly to the danger of miners.

Much can be done to prevent accidents by the introduction of safe hoisting cages, proper engineering, the use of suitable explosives, and adequate inspection laws, while Davy's safety lamps, incandescent electric lights, and copious ventilation will serve to prevent explosions of fire damp and aid in the purification of the air.

RAILWAY SERVICE.

Employees of the railway service, owing to a life full of hardships, exposures, and responsibilities, together with irregular habits, not only suffer from accidents, but also experience more or less sickness, especially from rheumatic affections, diseases of the digestive and respiratory organs, and injuries and disturbances of the nervous system. Forty-eight per cent of the German railway employees in 1885 were taken sick, as follows: Rheumatism, 8.18 per cent; digestive diseases, 11.12 per cent; respiratory diseases, 8.53 per cent; nervous diseases, 2.73 per cent. The train hands suffered most, and the office employees, of course, the least. The percentage of the different classes of sick employees was as follows:

PER CENT OF GERMAN RAILWAY EMPLOYEES TAKEN SICK, 1885 AND 1886, BY OCCUPATIONS.

Occupation.	1885.	1886.
Train arrangers	83	89
Train hands, engineers, conductors, brakemen, etc	65	66
Gate keepers, etc	54	50
Switch tenders	50	53
Track watchmen	40	42
Station employees	33	36
Office employees	23	26

Hedinger (b) has called attention to the fact that only 8 per cent of the German locomotive engineers have normal hearing, while 67 per cent of the engineers and 30 per cent of the firemen have very defec-

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[a] Greenhow, third and fourth report of the medical officer of the Privy Council, London, 1860–1861.

[b] Zeitschft. des Vereins d. Eisenbahnverwaltungen, 27, p. 25.

tive hearing; 14.5 per cent of the track walkers also had defective hearing. The percentage in all increased with the length of the service. The most common affection was catarrh of the internal and middle ear, probably due to abrupt changes in temperature.

RAILWAY ACCIDENTS.

The reports of the Interstate Commerce Commission indicate a constant increase in the number of injuries from railway accidents. The number of employees killed by accidents arising from the movement of trains, locomotives, or cars, as distinct from those of other causes, for the year ending June 30, 1906, was 3,709, of whom 2,310 were trainmen, and the number injured was 42,962, of whom 34,989 were trainmen. "The number of fatalities to trainmen in this class of accidents is nearly equally distributed among collisions, falling from trains, locomotives, or cars, and being struck by trains, locomotives, or cars. When all classes of employees are taken into account the last-named cause is responsible for the greatest number of fatalities."

"Of the fatalities to passengers, collisions account for more than any other single cause, although the number due to jumping on or off trains, locomotives, or cars is nearly as great. In the matter of injuries, however, collisions are far ahead, being responsible for more than 35 per cent of the total injuries to passengers. Taking both passengers and employees into account, it is seen that collisions are responsible for a much higher number of deaths and injuries than any other one class of accidents." ([a])

RAILWAY ACCIDENTS FOR THE YEARS 1888 TO 1906.

[From the Nineteenth Annual Report of the Interstate Commerce Commission on the Statistics of Railways in the United States, page 109.]

Year ending June 30—	Employees.		Passengers.		Other persons.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1888	2,070	20,148	315	2,138	2,897	3,602	5,282	25,888
1889	1,972	20,028	310	2,146	3,541	4,135	5,823	26,309
1890	2,451	22,396	286	2,425	3,598	4,206	6,335	29,027
1891	2,660	26,140	293	2,972	4,076	4,769	7,029	33,881
1892	2,554	28,267	376	3,227	4,217	5,158	7,147	36,652
1893	2,727	31,729	299	3,229	4,320	5,435	7,346	40,393
1894	1,823	23,422	324	3,034	4,300	5,433	6,447	31,889
1895	1,811	25,696	170	2,375	4,155	5,677	6,136	33,748
1896	1,861	29,969	181	2,873	4,406	5,845	6,448	38,687
1897	1,693	27,667	222	2,795	4,522	6,269	6,437	36,731
18[illegible]	1,958	31,761	221	2,945	4,680	6,176	6,859	40,882
1899	2,210	34,923	239	3,442	4,674	6,255	7,123	44,620
1900	2,550	39,643	249	4,128	5,066	6,549	7,865	50,320
1901	2,675	41,142	282	4,988	5,498	7,209	8,455	53,339
1902	2,969	50,524	345	6,683	5,274	7,455	8,588	64,662
1903	3,606	60,481	355	8,231	5,879	7,841	9,840	76,553
1904	3,632	67,067	441	9,111	5,973	7,977	10,046	84,155
1905	3,361	66,833	537	10,457	5,805	8,718	9,703	86,008
1906	3,929	76,701	359	10,764	6,330	10,241	10,618	97,706

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[a] Nineteenth Annual Report of the Interstate Commerce Commission on the Statistics of Railways in the United States, p. 112.

In 1899 the English Government appointed a commission composed of members of the House of Lords and Commons, representatives of the railway companies, railway employees, experts, and Government officials, with a view of determining whether the accidents to railway employees were so numerous as to constitute it a dangerous trade. The following table indicates that the employment of shunters (switchmen) is far more dangerous than any other occupation save seamen, and that the average work on railways is almost as dangerous as mining. ([a])

NUMBER OF EMPLOYEES KILLED AND INJURED FROM ALL CAUSES PER 1,000 EMPLOYED IN VARIOUS OCCUPATIONS IN GREAT BRITAIN, 1898.

Industry.	Number killed.	Number injured.
Railway servants in general, excluding contractors' men, clerks, and mechanics.	1.24	31.0
Goods guards and brakemen	2.92	61.0
Permanent-way men or platelayers	1.90	16.0
Shunters	5.08	78.0
Men porters (railways)	1.15	63.0
Seamen (merchant service)	5.20	Unknown.
Coal miners (underground)	1.37	Unknown.
Coal miners (surface)	.92	Unknown
Metalliferous mines (underground)	1.34	Unknown.
Metalliferous mines (surface)	.43	Unknown.
Factories, textile (males)	.10	6.2
Factories, textile (females)	....	2.7
Factories, nontextile (males)	.20	13.8
Factories, nontextile (females)	....	2.0
Factories, extraction of metals (males)	1.10	16.4
Factories, shipbuilding (males)	.50	39.3
Factories, dock laborers	1.40	57.0

ACCIDENTS AND INJURIES.

The total number of deaths reported during the census year of 1900 was 57,513, of which 43,414 were males and 14,099 were females, and the proportion of deaths from these causes in 1,000 deaths from all known causes was 57.6. In 1890 the corresponding proportion was 53.7. In the registration area the rate was 96 per 100,000 of population. In 1890 the death rate was 91.9. The rate in the cities was somewhat higher than in rural districts, and the rate for males was about three times as high (125.4) as it was among females (42.2). This is due simply to the more sheltered position of females and because males alone are generally engaged in the more dangerous operations.

The following table shows for the registration area and its subdivisions the death rates from accidents and injuries per 100,000 population, in each of three age groups.

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[a] Dangerous Trades, Oliver, p. 199.

DEATH RATES FROM ACCIDENTS AND INJURIES DURING THE CENSUS YEAR IN EACH OF THREE AGE GROUPS PER 100,000 OF POPULATION.

[From Report on Vital Statistics, Twelfth Census of the United States, 1900.]

Registration area.	Under 15.	15 to 44.	45 or over.
Cities in registration States	68.2	73.1	139.7
Males	86.1	122.4	206.7
Females	50.3	25.9	77.9
Rural in registration States	57.2	73.9	122.6
Males	72.7	122.1	109.5
Females	41.3	23.1	73.5
Total in registration States	63.7	73.4	131.2
Males	80.6	122.3	187.8
Females	46.7	24.9	75.8
Cities having registration, in other States	72.0	113.4	186.9
Males	92.6	186.6	291.0
Females	51.5	40.0	82.4
Total, registration area	67.0	89.8	156.5
Males	85.4	148.7	223.8
Females	48.6	31.1	78.0
Cities, total in registration area	70 2	94.3	163.8
Males	89.5	156.6	250.7
Females	50.9	33.3	80.1

From this table we learn that the highest death rates from accidents were for persons 45 years or over, and the lowest for children under the age of 15, which indicates that employment in factories, mines, and workshops influences to a great extent the number of accidents and injuries. The rates for females are the lowest in all three age groups, for reasons already assigned. Females, even in childhood, occupy a more favorable position than males, on account of the more reckless disposition of boys, whose rates are probably increased by deaths from drowning, falls, burns, gunshot wounds, etc.

An attempt to determine the number of persons injured per 1,000 employed in the factories was made in the State of New York during 1899. The data are based upon three months' observations in a selected list of factories, and are not regarded by the commissioner of labor and chief factory inspector of the State as absolutely accurate.

NUMBER OF PERSONS INJURED PER 1,000 EMPLOYED IN NEW YORK FACTORIES, 1899.

Industry.	Number.
Clothing, millinery, laundering, etc	1.35
Leather, rubber, pearl, etc	3.21
Textiles	8.91
Printing and allied trades	9.19
Food, tobacco, and liquors	13.51
Stone and clay products	15.18
Wood	18.42
Building industry	26.20
Metals, machinery, and apparatus	26.57
Public utilities	37.28
Pulp, paper, and cardboard	41.46
Chemicals, oils, and explosives	44.06

OCCUPATIONS INVOLVING THE INHALATION OF ORGANIC GASES AND VAPORS.

Whether the effluvia from sewers, stables, stock yards, slaughtering and packing houses; glue, candle, and soap factories; hide depots, tanneries, fertilizer-works, etc., are injurious to health remains an open question. Many authors insist that the olfactory organs are alone offended, and point to the mortality statistics, which indicate that the average age of such employees is quite high. Others hold that weaklings rarely engage in such occupations, and that the effluvia, consisting, as they do, of ammonia and sulphureted gases, are fully as injurious as the inhalation of sewer air, which, judging from experiments with animals, would appear to increase the susceptibility to infectious diseases by diminishing the power of resistance. Stift maintains that hydrogen and ammonium sulphides, chiefly derived from decomposition of animal matter and usually present in privy vaults, cesspools, and sewers, are blood poisons when present to the extent of about 1/4,000 volumes per hundred. The same author believes that the inhalation of sulphureted hydrogen affects directly the terminal filaments of the pneumogastric nerve, and through these sets up an irritation of the respiratory and cardiac centers—in fact, of the entire medulla oblongata—and if continued sufficiently long induces paralysis of this function.

In sewer air the danger is intensified by the excess of carbonic-acid gas and deficiency of oxygen, and special precaution should be taken to exhaust the foul air before sewer employees or scavengers are allowed to descend.

The general effects of the foul odors upon those unaccustomed to work in the so-called "offensive trades" are nausea, vomiting, headache, loss of appetite, diarrhea, a general depression, and weakness. It is true the workmen become gradually accustomed to these emanations without any apparent injury, but even this does not justify the assumption that the odors are not harmful.

Every community provides for the collection and disposal of dead animals, which is usually done by contract, and the animals are taken to some point beyond the town limits, flayed, and worked up, so as to utilize the skin, hair, bones, fats, horns, etc. There is, however, a certain element of danger from the transmission of infectious diseases like anthrax, glanders, and tuberculosis, and hence all such work should be done under strict sanitary control.

EMPLOYMENT OF WOMEN AND CHILDREN.

In the face of the many adverse circumstances under which labor is often performed, it is but natural that the immature employees and females should suffer most. The former not infrequently inherit a weak constitution, or acquire it by insanitary homes and deficient food, and a number of them are obliged to enter upon active work long before their bodies are sufficiently developed. Quite apart from the fact that child labor is a menace to education, morals, and good citizenship, the effects of premature and involuntary labor upon the health and physical welfare of the child are extremely detrimental.

Quetelet, in his Physique Sociale, as early as 1869 demonstrated that the muscles of the average child attain only at the age of 13 or 14 a certain amount of strength and capacity for work. Up to this time the muscular fibers contain a larger percentage of water, and in consequence are very tender and immature. Demetjeff, cited by Rubner, ([a]) determined the lifting power of the arms and trunk at different ages of the working classes to be as follows:

LIFTING POWER OF THE ARMS AND TRUNK OF THE WORKING CLASSES AT DIFFERENT AGES.

Age.	Pounds	Age.	Pounds
14 years	180.8	30 to 35 years	330.7
16 years	222.7	35 to 40 years	352.7
18 years	282.2	40 to 50 years	326.3
20 to 29 years	306.6	50 to 60 years	295.4

These figures clearly indicate that the average boy at the age of 14 possesses about one-half the muscular strength of an average adult between 35 and 40 years of age.

As a consequence of imperfect muscular development, it is not surprising that a large percentage of young persons engaged in workshops, factories, or even at the writing desk or merchant's counter, develop lateral curvature of the spine and other muscular deformities, not to mention general weakness and predisposition to rickets or tuberculosis and other pulmonary diseases. All of the bad effects are naturally intensified by insanitary environment, especially when the occupations are attended by the inhalation of dust, injurious gases, and impure air. The report of the commission on child labor, 1833–1834, appointed by the English Parliament, contains many interesting facts; but in spite of legislative efforts Dr. Charles W. Roberts ([b]) has occasion to refer to the prevalence of "flat feet," "knock-knee," and the premature aged condition of youthful employees.

Doctor Roberts says: "In general conformation of body the factory children do not compare favorably with the agricultural. In the manufacturing towns the children are short of stature, have thick limbs and large feet and hands, and are muscular and in tolerable condition as to fat. They produce the impression on the mind of having bodies too old for their heads (and ages). 'Flat foot,' with a general disposition to 'knock-knee,' is very common among the factory children, while both are rare among the agricultural, among whom there is a disposition to the opposite state, of bowleg."

Doctor Roberts ([c]) examined 19,846 English boys and men. Of these, 5,915 belonged to the nonlaboring classes, school boys, naval and military cadets, medical and university students; 13,931 belonged to the artisan class. The difference in height, weight, and chest measurement from 13 to 16 years of age was as follows:

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[a] Lehrbuch d. Hygiene, Leipzig and Wien, 1906, p. 709.

[b] London Lancet, 1875, p. 274.

[c] Cited by John Spargo, Bitter Cry of the Children, 1906, p. 96.

DIFFERENCE IN HEIGHT, WEIGHT, AND CHEST MEASUREMENT OF 19,846 ENGLISH BOYS AND MEN AT SPECIFIED AGES.

Class.	At 13 years.	At 14 years.	At 15 years.	At 16 years.
Average height in inches:				
Nonlaboring	58.79	61.11	63.47	66.40
Artisan	55.93	57.76	60.58	62.93
Difference	2.86	3.35	2.89	3.47
Average weight in pounds:				
Nonlaboring	88.60	99.21	110.42	128.34
Artisan	78.27	84.61	96.79	108.70
Difference	10.33	14.60	13.63	19.64
Average chest girth in inches:				
Nonlaboring	28.41	29.65	30.72	33.08
Artisan	25.24	26.28	27.51	28.97
Difference	3.17	3.37	3.21	4.11

Child labor differs in degree as well as in kind. The ordinary messenger or newsboy may not sacrifice his health, but his morals and his education must inevitably suffer. And so we see different gradations until some of the most injurious forms of child labor are encountered.

Women, on account of their imperfectly developed muscular system and more delicate physique, are unfitted for hard work; nor should they be obliged to work steadily in a sedentary position, especially at the sewing machine or other occupations involving the use of the lower extremities. Special protection should be extended to them during the child-bearing period. It is a matter of constant observation that women who have to deny themselves proper rest and care during the last six weeks of pregnancy and the first six weeks after confinement are very liable to suffer from hemorrhages and chronic uterine diseases, while miscarriages and premature births are not infrequent results of overwork. Recent statistics collected by Doctor Neisser (1907) indicate that such accidents are frequent among farmers' wives and women employed in the jewelry industry, where the motor power is supplied by the feet.

INFANT MORTALITY IN RELATION TO THE OCCUPATION OF WOMEN.

The subject of infant mortality has received careful attention, especially in England. The investigations made by Sir John Simon and his colleagues into the sanitary condition of England between 1859 and 1865 showed "that in proportion as adult women were taking part in factory labor or in agriculture the mortality of their infants rapidly increased." Among other causes, Simon attributes the excessive mortality of infants under 1 year, which in some registration districts was from two and a quarter to nearly three times as high as in standard districts, "to occupational differences among inhabitants: there being certain large towns where women are greatly engaged in branches of industry away from home, where, consequently, these houses are ill-kept, where the children are little looked after, and where infants who should be at the breast are improperly fed or starved, or have their cries of hunger and distress quieted by those various fatal opiates which are in such request at the centers of our manufacturing industry." ([a])

Fifty years have elapsed since Simon declared "infants perish under the neglect and mismanagement which their mothers' occupation implies." The subject has since been studied by the medical officers of the home office, the local government board, and 1,800 local health boards in England. Doctor Newman has carefully surveyed the facts concerning the number of females employed in gainful occupations, and the percentage of married women so employed, as well as the infant-mortality rate in towns having a low percentage of women employed in gainful occupations, as compared with textile towns, where the percentage of female employees is high. He has given careful consideration to the character and condition of the work, the length of working hours, employment before and after childbirth, and the sanitation of workshops. He dwells very justly upon the evil effects of the added strains of factory life, such as piecework, hard physical labor, injurious trade processes, fatigue, etc.

Doctor Newman tells how in some trades, like brickmaking, tinplate works, iron hollow ware, certain hardware trades, jam and sauce factories, and mat works, women are not infrequently employed in carrying or lifting weights which can not fail to be injurious to some. He emphasizes the various dangers to which the female employees are exposed, and summarizes the direct injuries as follows: (*a*) Accidents from machinery, materials, and other external agents; (*b*) injury or poisoning from toxic substances, or injury from excessive dust, fumes, vapor, or extremes of temperature (he refers also to anthrax infections in horsehair factories, tetanus in jute works, lung diseases in dusty trades, and abortion in lead works); (*c*) injury through fatigue and strain, long hours, insufficient periods of rest for food; (*d*) injury derived from defective sanitary conditions, such as bad ventilation, dampness, insufficiency or unsuitability of sanitary conveniences; and (*e*) too short a period of rest at the time of childbirth. ([b])

He declares that the official reports of factory inspectors and of medical officers of health reveal ample evidences of these injuries, and adds: "Where the conditions resulting in these evils, coupled with the absence of the mother from home, are present, the infant mortality is high; where they are not present it is usually low." He describes the general effects of the factory system at Dundee, where 24,879 women and girls are employed in the jute and hemp factories, and 3,000 women are employed in other textile works. One-quarter of the women, or about 6,000, are married, and about 16 per cent of all the girls in Dundee between the ages of 10 and 14 are employed in these trades.

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[a] Papers Relating to the Sanitary State of the People of England, 1858.

[b] Infant Mortality, George Newman, M. D , New York, 1907.

The infant mortality rate for Dundee "is exceptionally high, and for the decennial period 1893-1902 was 176 per 1,000 births." In 1904 there were 788 infant deaths, 129 of which occurred within the first week, and all but four of these were medically certified as due to "prematurity and immaturity." Nearly one-half of the total number occurred in the first three months of life. Inquiry was made into the social conditions of the home life of 364 of these infant deaths and it was learned that "the occupations, or former occupations, of the mothers were as follows: 84 weavers, warpers, or winders; 105 spinners, piecers, or shifters; 88 preparers; 12 sack machinists or sack sewers; 27 miscellaneous; 20 unoccupied, and 25 concerning which there was no return obtainable. Of the cases inquired into 13.2 per cent of these mothers worked at the factory to within a week of childbirth. Fifteen women worked to within a few hours of childbirth."

Doctor Newman's final conclusion on the subject of infant mortality in relation to the occupation of women is as follows:([a])

"No doubt the factory plays a part, but the home plays a vastly greater part, in the causation of infant mortality in the towns where women are employed at the mills. There are two influences at work—first, the direct injury to the physique and character of the individual caused by much of the factory employment of women; and, secondly, the indirect and reflex injury to the home and social life of the worker. We can not afford to forget either of these points in attempting to estimate the operations of the factory in infant mortality. It is because they have not been sufficiently correlated together that fallacy has arisen in the past. But even yet we have not finished. 'Infantile mortality in Lancashire,' writes an experienced medical officer of health for a town in that county with an infant mortality in 1904 of 222, 'is, I am sorry to say, as much a financial as a hygienic question.' Why do married women work in the mills? is the question this medical officer has reached. His answer is that 'a weaver's wages will not allow of the wife's remaining at home, considering the high rents and rates, and so both go—which is the rule—and a hand-to-mouth existence results even for themselves, let alone the little ones, who are left in the intervals to the mercies of the nurse, who, as a rule, takes in the babies to eke out her own husband's wages. Much good may be done by hygienic tuition, and I am certain that the root of the whole matter with us is, as I have in [illegible], comparatively low wages and high rents and rates.'"

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[a] Infant Mortality, Newman, pp. 137, 138.

In the discussion of infant mortality it would be unfair not to emphasize other facts, such as impure and dirty milk and one-room tenements. Of 54,047 infantile deaths which were investigated both in the Old and the New World as to the character of feeding, it was found that 86 per cent had been artificially fed. Neumann, in investigating 2,711 infantile deaths in Berlin, found that 1,792 occurred in one-room apartments, 754 in two-room apartments, 122 in three-room apartments, and 43 in apartments of four rooms and over.(a)

SPECIAL MEASURES FOR THE PREVENTION OF TUBERCULOSIS AMONG WAGE-EARNERS.

There is abundant statistical evidence to show that industrial workers pay a very heavy tribute to the so-called "white plague;" nor is this surprising when the many unfavorable factors to which the workers are subjected are considered, such as crowded and insanitary workshops, deficient light, overwork, long hours in a bad air, dampness, exposure to extremes of heat and cold, sudden changes in temperature, and the inhalation of irritating dust, vapors, etc. All of these factors are calculated to lower the power of resistance and favor the spread of the disease, especially when some of the workmen are already afflicted and are careless in expectorating.

Still it would be manifestly unfair not to consider the influence of home environment, such as unclean and crowded or otherwise insanitary dwellings, insufficient or improper food, and last, but not least, the bad effects of the abuse of alcohol. It has been shown that alcohol not only affects the digestive and nervous functions, in consequence of which the general nutrition of the body is markedly reduced, but the habit of visiting and remaining in saloons for hours, sometimes till midnight, deprives the individual of proper rest and also exposes him to the poisonous fumes of tobacco, coal and carbonic-acid gases, and other injurious agents. The preventive measures are partly the duty of the state, which should regulate the air space and ventilation of the workshops and dwellings and improve the working conditions by forced ventilation and "wet processes," in order to diminish dust production and exposure to irritating gases. On the other hand, it is clearly the duty of the workmen and the community at large to improve social and housing conditions. In view of the undue prevalence of consumption among file cutters, metal grinders, stonecutters, and cotton, flax, and tobacco operatives, persons predisposed to this disease should be cautioned against engaging in such occupations. Simple printed instructions should b[illegible] given as to the part expectoration plays in the spread of consum[illegible]tion. Cuspidors in sufficient number and properly disinfected shoul[illegible] be provided, preferably one for each workman, and promiscuous expectoration should be forbidden.

(a) Deutsche Med. Wochenschrift, Leipzig, 1904, p. 1723.

MEASURES FOR THE PROTECTION OF WAGE-EARNERS.

One of the important predisposing causes to disease is overwork or fatigue, because the accumulation of waste products in the blood, from muscular wear and tear, together with the expended nervous energy, combine to render the system more susceptible to disease. Excessive work is inimical to health, and long hours and hard work are calculated to diminish the general power of resistance, and thus bring about physical deterioration. Hence the necessity of laws regulating the hours of labor and the enforcement of a day of rest as contemplated by the Sunday laws.

From the standpoint of the physician no child under the age of 14 should be permitted to work in factories and wage-earning occupations. Children over 14 years of age should be permitted to engage in such occupations only upon the presentation of a medical certificate showing that they are free from physical defects, and should not be obliged to work longer than six hours with a two-hour interval of rest after the first three hours, so that they may be able to enjoy their noonday meal. Under no circumstances should they be permitted to perform night work or engage in the so-called dangerous occupations. The same may be said of individuals between the ages of 16 and 18 years, who, however, may be permitted to work eight hours a day, with proper intervals for meals and rest.

Women, from a moral standpoint alone, should not be permitted to work in factories or shops after sundown. The laws of some countries prescribe for females one hour for nooning, if they have their own households, and their exclusion from factories six weeks before and after confinement, while in other countries hard labor for women is strictly forbidden.

SANITATION OF WORKSHOPS AND QUARTERS FOR EMPLOYEES.

Many writers contend that the protection of wage-earners should extend to the work and workshops, and, in case the employees are housed by the employer, also to the living and sleeping quarters.

A sanitary workshop demands sufficient air space for each inmate, a suitable temperature, proper ventilation and illumination, general cleanliness, and suitable opportunities for personal cleanliness. The necessity for abundant ventilation is apparent when it is recalled that men at work give out more carbonic-acid gas than individuals at rest, and that in the majority of occupations the air is further vitiated by the presence of dust and gases.

The question of illumination is not only important for the prevention of defective vision and accidents, but when recourse is had to artificial illumination the additional vitiation of the air must be considered. Such matters, which, after all, are largely questions of public health, should not be left to the individual employer, but the principles of industrial hygiene which ought to be adopted should be embodied in suitable laws and enforced by competent inspectors. Among the most dangerous forms of workshops is one class which most State laws entirely ignore. For example, under the law of the State of New York relating to manufacturing in tenement houses, 33 distinct industries may be carried on in the living rooms of the workers, because they involve hand work or simple machinery. There are over 23,000 licensed "home factories" in the city of New York alone. Dr. Annie S. Daniel, who made a special investigation of manufacturing in tenements, says that "every garment worn by a woman is found being manufactured in tenement rooms"; ([a]) and that the same is true of clothing worn by infants and young children. In addition to wearing apparel for men, women, and children, including adornments of woman's dress, the flowers and feathers for her hats, the hats themselves, and neckwear of every description, Doctor Daniel found that paper boxes, cigars, pocketbooks, jewelry, clocks, watches, wigs, fur garments, paper bags, etc., were being made and that the articles were frequently handled and stored in infected rooms. According to Doctor Daniel, among the 150 families tabulated by her, 66 continued at work during the entire course of the contagious disease for which she attended the family, and the question naturally arises, How many germs of tuberculosis, measles, scarlet fever, diphtheria, and other infectious diseases may be sewed in the garments made in the tenement "sweat shops?" And last, but not least, the greatest danger falls upon the workers—it means, physically, the loss of health; morally, the loss of home, because home life is impossible in a tenement workroom.

Apart from the occupations referred to, numerous bakeries; candy, ice-cream, and milk shops; butcher shops and sausage factories; bottling establishments; tailor, cobbler, and other repair shops are carried on in basements under the most insanitary surroundings as regards workrooms and sleeping quarters.

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[a] Charities, April 1, 1905.

CUBIC AIR SPACE AND AMOUNT OF FRESH AIR PER HOUR.

Reference has been made to the baneful effects of vitiated air, which are of course intensified when the occupation is attended with the production of dust and irritating fumes or gases. It is known that carbonic acid is not itself a toxic agent, but an exc this gas in the air of rooms leads to a deficiency of oxygen, an uous defective elimination of carbonic acid from the system, whi be excreted whenever the pressure of carbonic acid in the NERS. that of the carbonic acid in the blood. In order that the re impurities may not exceed certain limits (6 volumes of carbo k or per 10,000), it has been found that an average adult requires m cubic feet of fresh air per hour, and this amount should be supp without discomfort to the occupants. Experience has shown th the air of a room can not be changed oftener than three times in one hour in winter without causing a disagreeable draft; hence every occupant should have a cubic air space of 1,000 feet. This is the ideal standard, and section 100 of the factory laws of New York of 1901 (as amended by chapter 129, Acts of 1906), relating to certain manufactures in tenements, provides "that the whole number of persons therein shall not exceed one to each 1,000 cubic feet of air space." Such an ideal standard, however, is not always attainable in workshops, and it is believed that for practical purposes an air space from 400 to 500 feet per capita will suffice.

New York, Indiana, Maryland, Michigan, New Jersey, Ohio, Pennsylvania, and Wisconsin appear to be the only States which make definite provision as to air space in factories and workshops. In five of the States the air space must not be less than 250 cubic feet for each employee between the hours of 6 a. m. and 6 p. m., and, unless by written consent of the factory inspector, not less than 400 cubic feet for each employee between the hours of 6 p. m. and 6 a. m., provided such room is lighted by electricity, etc. This is a step in the right direction, but it would be extremely desirable to place the minimum amount of cubic air space at 400 feet for day work and 500 feet for night work, unless electricity is used, in which case a uniform standard of 400 feet might be prescribed. At all events the question of sufficiency ought not to be left to the discretion of the factory inspector. Either the cubic air space should be specified or the carbonic acid limited to 12 volumes per 10,000.

VENTILATION.

Ventilation, which means the removal and dispersion of bad air and the introduction of fresh air, is accomplished either by natural or artificial means. Natural ventilation is usually sufficient when each occupant has 1,000 feet of cubic air space, when the walls of the building are porous or contain numerous crevices near the doors and windows, when the difference between the indoor and outdoor temperature is considerable, and when the winds strike the walls directly or pass with great velocity over chimney flues or other openings.

Ti as the direction and force of the winds can not be controlled ventiothe other factors referred to are absent, other means should be o artifici. For this purpose open windows, doors, and revolving fans considered.ll in summer. The objection to this method are the cold public heawinter. In rooms heated with direct radiation the fresh air principlqtherefore be admitted above the heads of the occupants, either mbod'sh-air register inlets in the walls or by the insertion of louvered Amor inging windows, an upward direction being thus given to the air, no that it may impinge on the ceiling, mix with and be warmed by the heated air in this situation, fall gently into all parts of the room, and be gradually removed by means of foul-air outlets, aided by exhaust fans. Another simple plan is to bore slanting holes in the bottom rail of the window sash, or to insert a piece of board 4 inches wide across the window sill.

Artificial ventilation may be secured by providing (1) suitable inlets and outlets, (2) by extraction by heat, or the creation of a decided difference between the inner and outer temperature, and (3) by propulsion and aspiration. Space will not permit to enter into details except to say that, besides the contrivances already mentioned, any of the ordinary registers in which the air passes through the walls by means of a perforated iron plate and is then directed upward by a valved plate with side checks will prove of service. One class of ventilators consists of two cylinders, one inside the other and of different lengths; the longer tube, projecting above and below, serves to conduct the impure air, while the outer cylinder, having a larger sectional area, serves as an inlet. The outlet is protected on the top with a cowl, and both tubes can be regulated by valves. They are especially useful in the ventilation of one-story buildings or the upper story of any building. If gas is used as an illuminant, the burners may be placed immediately under the extracting tube. As the warm air escapes through the inner tube a corresponding volume is admitted through the interspace between the two cylinders.

Another class consists of openings through the ceiling and roof with louvered sides and ends, protected with a small roof, the opening of the air shaft in the ceiling usually being provided with suitable registers. The fresh air is admitted by the means already referred to, or by registers placed behind radiators. If the building is heated by stoves, the fresh air may be admitted by inlets running underneath the floor between the joists and discharging through a register near the stove.

Extraction of foul air by heat is usually accomplished by placing a separate flue next to the chimney flue; the latter, if in use for firing purposes, creates an upward current. If this is not sufficient it may be promoted by gas jets or a steam coil placed in the flue.

The propulsion and aspiration system is especially adapted for all
large buildings and factories, and consists of mechanical devices of
which the fresh air is forced into and distributed throughout t also to
ing by the use of fans or air propellers, the foul or objectn can not
being removed by so-called exhaust fans. A number of Sir exceeds
made statutory provisions for the ventilation of workshspiratory
quite a number, including California, Connecticut, Illinois, nic acid
Iowa, Maryland, Massachusetts, Ohio, Oregon, Pennsylvania, 3,000
gan, Minnesota, Missouri, New Jersey, New York, South Daplied
Washington, and Wisconsin, require mechanical devices for the rat
moval of injurious dust or gases. Of these States several lay down specific rules concerning the construction of workbenches and hoods. The latter empty into air shafts connected with exhaust fans, and thus extract all dust and fumes without material injury to the operatives from drafts. The provisions apply especially to operations in which emery wheels or belts or other buffing processes are employed. The laws of the State of Michigan, Acts of 1899, furnish a good example of regulations of this character:

ACTS OF 1899.

ACT NO. 202.—*Factories and workshops -Blowers for emery wheels, etc.*

SECTION 1. All persons, companies or corporations, operating any factory or workshop, where wheels or emery belts of any description are in general use, either leather, leather covered, felt, canvas paper, cotton or wheels or belts rolled or coated with emery or corundum, or cotton, wheels used as buffs, shall provide the same with fans or blowers, or similar apparatus, when ordered by the commissioner of labor, which shall be placed in such a position or manner as to protest [protect] the person or persons using the same from the particles of the dust produced and caused thereby, and to carry away the dust arising from, or thrown off by such wheels, or belts, while in operation, directly to the outside of the building or to some other receptacle placed so as to receive and confine such dust, and the same shall be placed in such factory or workshop within three months after this act shall take effect, in the manner and according to the directions and specifications as herein, in this act set forth: *Provided*, That grinding machines upon which water is used at the point of grinding contact shall be exempt from the conditions of this act: *And provided further*, That this act shall not apply to solid emery wheels used in sawmills or planing mills or other woodworking establishments.

SEC. 2. It shall be the duty of any person, company or corporation operating any such factory or workshop to provide or construct such appliances, apparatus, machinery or other things necessary to carry out the purpose of this act, as set forth in the preceding section, as follows: Each and every such wheel shall be fitted with a sheet or cast-iron hood or hopper of such form and so applied to such wheel or wheels that the dust or refuse therefrom will fall from such wheels or will be thrown into such hood or hopper by centrifugal force and be carried off by the current of air into a suction pipe attached to same hood or hopper.

SEC. 3. Each and every such wheel six inches or less in diameter shall be provided with a three-inch suction pipe; wheels six inches to twenty-four inches in diameter with four-inch suction pipe; wheels from twenty-four inches to thirty-six inches in diameter with a five-inch suction pipe; and all wheels larger in diameter than those stated above shall be provided each with a suction pipe, not less than six inches in diameter. The suction pipe from each wheel, so specified, must be full sized to the main trunk suction pipe, and the said main suction pipe to which smaller pipes are attached shall, in its diameter and capacity, be equal to the combined area of such smaller pipes attached to the same; and the discharge pipe from the exhaust fan, connected with such suction pipe or pipes, shall be as large or larger than the suction pipe.

SEC. 4. It shall be the duty of any person, company or corporation operating any factory or workshop, to provide the necessary fans or blowers to be connected such pipe or pipes, as above set forth, which shall be run at such a rate of speed produce a velocity of air in such suction or discharge pipes of at least nine feet per minute or an equivalent suction or pressure of air equal to raising a water not less than five inches high in a U-shaped tube. All branch pipes the main trunk pipe at an angle of forty-five degrees or less. The main trunk pipe, shall be below the polishing or buffing wheels and as close to as possible and to be either upon the floor or beneath the floor on which the are placed to which such wheels are attached. All bends, turns or elbows pipes must be made with easy smooth surfaces having a radius in the throat less than two diameters of the pipe on which they are connected.

SEC. 5. It shall be the duty of any factory inspector, sheriff, constable or prosecuting attorney of any county in this State, in which any such factory or workshop is situated, upon receiving notice in writing, signed by any person or persons, having knowledge of such facts, that such factory or workshop, is not provided with such appliances as herein provided for, to visit any such factory or workshop and inspect the same and for such purpose they are hereby authorized to enter any factory or workshop in this State during working hours, and upon ascertaining the facts that the proprietors or managers of such factory or workshops have failed to comply with the provisions of this act, to make complaint of the same in writing before a justice of the peace, or police magistrate having jurisdiction, who shall thereupon issue his warrant directed to the owner, manager or director in such factory or workshop, who shall be thereupon proceeded against for the violation of this act as hereinafter mentioned, and it is made the duty of the prosecuting attorney to prosecute all cases under this act.

TEMPERATURE.

It is a well-known fact that the welfare and capacity for work of individuals are to a great extent influenced by the surrounding temperature. Reference has been made (p. 520) to occupations involving exposure to extremes of heat and cold, dampness, and sudden changes. The human organism possesses the faculty of maintaining a uniform temperature; i. e., it so regulates and harmonizes the production and the loss of animal heat that the normal temperature of the blood, 98.2 Fahrenheit, is not materially affected, and in this the skin doubtless plays the most important rôle. Whenever cold acts upon the skin the irritation is primarily exerted upon the nerves, which transmit it to the central organs of the nervous system (the heat-regulating center), and from there it is reflected to the nerves of the cutaneous vessels and muscular fibers, which promptly contract, and in consequence of a diminished blood supply there is less loss of heat. If, on the other hand, heat instead of cold plays upon the skin, we have dilatation instead of contraction of the vessels, with an increased surface blood supply and corresponding loss of heat by radiation and conduction. At the same time the perspiratory glands are stimulated to greater activity, more sweat is excreted and evaporated, and still more heat is dissipated. One of the bad effects of profuse perspiration is that the blood is deprived of some of its constituents. The blood is taken away too long from the internal organs; the proper distribution of the blood supply is interfered with, and in consequence the tone and nutrition of the stomach, lungs, heart, and other internal organs is lowered. There is loss of appetite and indigestion ensues; the red corpuscles are decreased; languor and general enervation is experienced, and the system in consequence is rendered more suscept to disease.

While the human organism endeavors to adapt itself to ext heat and cold, the faculty of the body to maintain the equi by no means unlimited, and the heat-regulating center is lia or become paralyzed if imposed upon too long or too fre This is especially the case during sudden changes of temperatu is the abruptness which offends the peripheral nerves, and the gr the abruptness the more intensive will be the irritation which is tran mitted by reflex action to other parts of the body, usually the weakes parts; it may result in driving the blood to internal organs, causing congestions and other mischief. Then again a cold draft playing on the cheek may cause neuralgia, paralysis, sore throat, bronchitis, or pneumonia, showing that cold applied locally may excite disease in the neighborhood of its application or in distant organs, and finally it may produce disease by checking the secretions of the skin.

The most agreeable temperature for average healthy adults properly clothed and performing light work is between 65 and 70 degrees Fahrenheit, and every effort should be made to avoid extremes of heat and cold. Much may be done to reduce the temperature of workshops by forced ventilation and a supply of cool, fresh air. The windows should be kept open during the summer nights, so that the rooms may be thoroughly flushed with fresh and cool air.

HUMIDITY OF THE AIR.

The atmosphere always contains a certain amount of water in the state of vapor, which varies from 30 per cent to complete saturation, or, according to temperature, from 1 to 12 grains in a cubic foot of air. The degree of atmospheric humidity is of special hygienic importance, as it influences to a great extent the cutaneous and pulmonary exhalation of vapor, and in consequence also affects the animal temperature. The average daily amount of water eliminated by the skin is 2½ pounds, and about 10 ounces by the lungs. It is evident that when the air is damp evaporation is lessened, because damp air possesses little drying power, and the water from the skin and lungs is with difficulty evaporated. The evaporation of perspiration, by which much heat is rendered latent, is one of the chief sources of cooling of the body. Consequently when the air is hot and moist the humidity tends to increase the effects of the heat, the blood is with difficulty kept at its proper temperature, and all the disagreeable effects of a high temperature are intensified. This condition may be so aggravated that the temperature of the body exceeds the normal degree and causes the so-called heat stroke or heat exhaustion, which occurs especially on hot, sultry days.

Bu[illegible]amp, cold, or chilly air also produces mischief, because it ab- and it [illegible] undue amount of animal heat, lowers the general vitality provide[illegible]em, and favors the development of diseases of the respira- answer we[illegible]s and of neuralgic and rheumatic affections, and aggra- drafts in [illegible] severity of such attacks. We may conclude, therefore, should [illegible]essive humidity tends to intensify the effects of both heat by fre[illegible]id. On the other hand, excessive dryness of the air is also or s[illegible]ul; it increases evaporation, the skin becomes dry and chapped, [illegible] the mucous membranes of the mouth, eyes, and respiratory passages are irritated, causing so-called catarrhal conditions. For all these reasons an average relative humidity between 65 and 75 per cent has been found most healthful, and efforts should be made to maintain such a standard whenever practicable.[a] Apart from methods calculated to accomplish these results, reliable thermometers and hygrometers are required to secure efficient control. Instead of making a general provision for sufficient heat, moisture, etc., State legislators [illegible]uld do well to prescribe a standard, at least in industries where such a standard is practicable and can be reasonably enforced.

LIGHTING.

The natural light in workshops should be sufficient so that the eyes need not to be strained even on cloudy days. When the light is defective the objects have to be brought too near. The eyes in consequence converge, and the muscular strain thus induced causes a gradual elongation of the anterior-posterior axis of the eyeball, and nearsightedness results. In addition, it is believed by specialists that 80 to 90 per cent of the headaches are casused by eye strain. It has been found by Putzeys(a) that the natural lighting in temperate climates will usually come up to hygienic requirements when the area of windows, exclusive of sash frames, equals one-sixth of the floor space. In order that the light may penetrate the deeper portions of the room, the windows should reach almost to the ceiling and the glass should be either pure white, ribbed or prismatic, and kept clean. Wisconsin is apparently the only State which has undertaken to legislate specifically upon this point, as section 3 of chapter 79, Acts of 1899, provides: "Every window shall have not less than 12 square feet in superficial area, and the entire area of window surface shall not be less than 12 per cent of the floor space of such room."

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[a] Cited by Munson, Military Hygiene, 1901, p. 521.

The difficulty of securing a sufficient amount of daylight in buildings located on narrow streets surrounded by tall buildings has been partly overcome by glass building blocks, 8 by 6 by 2½ inches, with an air chamber in the center, used instead of brick or stone, in connection with steel-frame construction, but more particularly by introduction of prismatic glass, which refracts and diffuses th

ARTIFICIAL LIGHT.

No matter how obtained, artificial light differs from d this, that it does not furnish a pure white light, the prevai being red, yellow, or violet. Whatever difference of opinio may be as to the color best suited to our eyes, we know tha vision is most perfect under the influence of a white light, and t ought to be a good criterion. One of the disadvantages of all low power illuminants is that the light is never so bright as daylight, involving, therefore, closer application of the eyes and consequent strain of the muscles of the eyeball. These remarks are hardly applicable to the electric arc light and the Welsbach gas-burner, the rays of which, like the direct solar rays, may indeed be so glaring as to cause undue irritation of the retina.

Another harmful effect of artificial illumination is the unsteady or flickering character, especially seen in the electric arc light, and which on account of the abrupt changes is likely to irritate the retina. Another disadvantage is that the ordinary illuminants, except the electric light, tend to vitiate the air by the products of combustion, and also affect the temperature and humidity of the air by the heat evolved.

The requirements of a hygienic light are that it should be as near as possible the color of the sunlight, sufficiently ample but not too glaring; it should be steady, and instead of deteriorating the air it should as far as practicable be utilized to promote ventilation; nor should the heat evolved be sufficiently intense to be a source of discomfort to the inmates in warm weather. The most common methods of lighting now employed are the electric incandescent lamps, arc lights, mercury-vapor lights and electric bulbs, gaslight, and kerosene lamps. Of these, the electric lights, especially the mercury-vapor lights, are superior to gas or other illuminants because there is little or no danger from fire, there are no products of combustion, hence no pollution of the air, nor are the temperature and humidity of the room affected to any perceptible extent. These advantages over gas or kerosene are of special importance to the inmates of the buildings where the question of fresh air and temperature plays an important rôle; hence many industrial plants find it profitable to install the very best type of electric lighting, and thereby save time and money by the prevention of sickness and accidents among their

employees. Next to the electric light, gas, especially in connection with a Welsbach or Siemen's burner, or the acetylene gas, offers the next best choice. In the absence of either electric or gas light, kerosene with a high flashing point should be preferred over other illumi-
Buta. In all such instances suitable outlets for the products of
and ittion should be provided.
provided clean ceilings and walls will be of great service not only in
answer we question of light, but also in general sanitation, and a
drafts in Y States, notably Indiana, Kentucky, Missouri, New Jersey,
should ty York, require the walls to be limewashed or painted.
by fre sufficiency of artificial lighting may be approximately deter-
or syd by observation, and quite accurately by the employment of
samsen's method and his photometer. In this country and England, according to Munson, "the unit adopted for the measurement and comparison of lights is a No. 6 sperm candle burning 8 grams per hour and giving out a light known as '1 candlepower.'" Such a candle contains on analysis carbon, 80 per cent; hydrogen, 13 per cent; oxygen, 6 per cent, and in combustion yields equal volumes of carbonic acid and watery vapor to the air, namely, 0.41 cubic foot.

PREVENTION OF ACCIDENTS.

Twenty-one States have taken steps to reduce accidents to a minimum. For this purpose they have enacted laws concerning employers' liability if they fail to provide safety devices for the movable and dangerous parts of machinery. Apart from proper screening, belting, etc., the use of respirators, wire masks, and goggles are absolutely essential for the prevention of accidents or injuries in many employments. At least 29 States require some form of protection in case of fire, by means of fire escapes and doors swinging outwardly, while a respectable number also insist upon inspection and registration of steam boilers.

A careful inspection of steam boilers and examination of engineers have materially lessened the dangers from boiler explosions, so that in England there is only about 1 explosion in 6,200 registered boilers.

It has been suggested that employees who come in contact with moving machinery should provide themselves with suitable clothing, so fitted and arranged as to reduce the dangers to a minimum. There is an endless variety of suitable patterns in the market, of which the snug-fitting duck union suits properly buttoned and adjusted are the best. Asbestos clothing has been recommended for firemen and furnace operators; but as it is rather heavy, light leather suits or aprons are preferable, while even ordinary clothing may be rendered practically noninflammable by chemical treatment.

MISCELLANEOUS SANITARY PROVISIONS.

A number of States have enacted laws concerning general cleanliness of factories and workshops. Most of the factory laws make provisions for the necessary sanitary conveniences, such as privies, water-closets, and urinals, and where men and women are employ separate dressing rooms and water-closets are called for. S the States, like Wisconsin, for example, specify "that when t ber employed is more than 25 of either sex there shall be p additional water-closet for such sex up to the number of 5 and above that number in the same ratio."

A large number of States make wash rooms, dressing room ers to seats for female employees obligatory, and not a few insist u separate provisions for the sexes. The importance of persona cleanliness has been pointed out. In certain occupations the washing of the hands before eating is important, and in occupations involving exposure to poisonous dust or agents the employment of a general bath should be encouraged by insisting upon the introduction of suitable shower baths.

A few States, notably Massachusetts and Rhode Island, make provisions for "fresh drinking water, of good quality." The former State also regulates the spitting habit by insisting upon suitable spittoons. These and other questions, like clothes lockers and lunch rooms, and the time allowed for the noonday meals, which is already regulated in a number of States, should receive universal attention. Much industrial legislation has been enacted by State legislatures during the past ten years. Commendable progress has been made in the provision of ventilation, heating, lighting, removal of dust, and general sanitation of workshops. The need for additional improvement is shown by the Massachusetts Board of Health's survey of the work in that State, which has generally been in the lead in factory laws.

The Report of the State Board of Health, on page 4, reads:

"In many [industries] the conditions were found to be satisfactory. In the emery and corundum, sandpaper and certain other industries more attention should be given to keeping the dust away from the mouth and nostrils of the workmen. In the rag dusting, sorting and cutting rooms of some paper mills very objectionable amounts of dust were found, with some pale and sickly appearing operatives; but there are mills using the same kind of stock where the dust is kept away from the employees in a satisfactory manner, and much improvement is practicable in the former class."

The same remarks are applicable to the textile industries, and the hope is expressed that the unsatisfactory conditions found in the minority of establishments will be raised to those which are now found to be good.

Reference has already been made in these pages to the conditions found in machine shops, the cutlery and tool industry, cigar, rubber, boot and shoe, and other industries examined. In the boot and shoe industry comment is made upon "four conditions which can be [illegible]nd ought to be remedied. These are: poor ventilation, inadequate [illegible]val of dust from machines; the conditions of water-closets; and The [illegible]on the floors. In the majority of factories visited the ven- influence was found to be poor, and in many of them distinctly bad. the healt[illegible]oms not especially dusty, 102 were badly ventilated and 26 of the overcrowded. * * * Of 84 of the many dusty rooms Th[illegible]ed, 40 were also overcrowded, 35 were dark, 21 were over- Vill[illegible]ed, and 18 were overcrowded, dark, and overheated.

"In more than one-third of the factories visited the conditions of water-closets were not commendable; most of them were dark and dirty to very dirty. In 50 establishments no spitting was noticed, in 173 there was some, in 115 considerable, and in 35 much.

"In some establishments lunch rooms are provided, where employees may eat the luncheon they have brought or may buy one; in much the larger number the employees eat in the workrooms. * * * In 85 factories, or 23 per cent of those visited, a considerable proportion of the employees are noticeably pale and unhealthy."([a])

In discussing the following provisions in the Massachusetts laws, "All factories shall be kept clean," the State board of health very properly points out that "what is clean in an ax-grinding factory would not be clean in a silk mill; but the law makes no distinction, and the judgment of the officer can not be received as law." The board considers it impossible to specify in any law a standard of cleanliness applicable to all industries, and advises "that the officer should be authorized to hold all factories in any industry up to the standard of cleanliness which he finds maintained in the factories in the same industry and using the same grade of stock which are the cleanest." The same method is recommended for the enforcement of standards in other directions, subject to an appeal to the State board of health.([b])

LODGING HOUSES AND SLEEPING QUARTERS.

It not infrequently happens that large industrial plants and contractors provide board and lodging for their unmarried employees. Again, in a number of the smaller industries the employees not infrequently board with the family and are obliged to sleep in objectionable rooms. All such provisions should come up to a reasonable standard as regards salubrity, air space, light, heat, and ventilation, and separate provisions should be required for males and females and youthful employees. Lodging houses should come up to a certain standard, and wash and bath rooms and suitable toilet facilities should be provided. Special attention should be paid to general cleanliness within and without quarters for working parties, and to the character and preparation of food.

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[a] Report of the State Board of Health of Massachusetts upon the Sanitary Condition of Factories, Workshops etc., 1907, p. 6.

[b] Ibid., pp. 7, 8.

PERMANENT EXPOSITIONS DEVOTED TO INDUSTRIAL AND SOCIAL BETTERMENT OF WAGE-EARNERS.

It will require time and patience to bring employers and workers to a full realization of the dangers incident to the various occupations and to a thorough appreciation of the methods which have been proposed in the way of factory sanitation, safety devices, etc. Good results abroad have been accomplished by a permanent exposition devoted to social and industrial betterment for wage-earners. Such an exposition was provided for by the German Government a few years ago, and a similar effort is now being made in the city of New York. The German exposition occupies a building specially erected for the purpose at Charlottenburg, a suburb of Berlin, and here every safety appliance which inventive genius has devised can be seen in practical operation. The different labor unions appear to profit immensely by the special lectures and demonstrations which are given on Sundays or, upon request, at any convenient time, by men formerly employed in "dangerous occupations." Apart from safety devices for machinery and appliances for removal of dust and injurious gases, all improved methods calculated to diminish danger, as, for example, in the manufacture of white lead, etc., are illustrated by models and descriptive text, printed leaflets being distributed free of charge. Here, too, may be seen the best and most recent types of respirators, wire masks, goggles, illuminating appliances, and safety working suits. Inventors and designers esteem it a great honor to have their products admitted for exposition. Only meritorious objects are displayed, and they are replaced by the newer and more satisfactory types. One of the most interesting collections consists of a series of bottles containing different varieties of dust, a series of photographs showing the microscopical character of this dust, and, last but not least, anatomical specimens and microscopical slides showing the effects of dust upon the air passages and lungs of the human subject. Models, plans, and photographs of tenements and model homes for wage-earners, exterior and interior decorations, literature and charts concerning industrial betterment, all find a prominent place in the exhibit. The display of food stuffs, their nutritive and economic value, together with instructive leaflets, form part of this interesting exposition. A popular pamphlet seen at the exposition in September, 1907, was compiled by Professor Kalle and Doctor

Schellenberg, entitled "How to keep well and capacitated for work," which is sold by the Society for Popular Education, at 2½ cents a copy, over 470,000 having so far been sold.

EVIL EFFECTS OF INSANITARY HOUSES AND OVERCROWDING.

The primary object of habitations is to secure protection from the influence of heat, cold, rain, sunshine, and storms, and thus promote the health and happiness and indirectly also the morals and culture of the human race.

The influence of sanitary houses can not be overestimated. Doctor Villermé, in an investigation in France from 1821 to 1827, found that among the inhabitants of arrondissements containing 7 per cent of badly constructed dwellings 1 person out of every 72 died, of inhabitants of arrondissements containing 22 per cent of badly constructed dwellings 1 out of 65 died, while of the inhabitants of arrondissements containing 38 per cent of badly constructed dwellings 1 out of every 15 died.

With the present rapid-transit facilities in nearly every city individual homes should be possible to most workers, and when this is impracticable broad streets and deep yards should be insisted upon. No more than 68 per cent of the lot should be covered by the house, and the height of the building should not exceed the width of the street. The baneful effects of tenement houses should be avoided, as infectious diseases are more liable to spread in consequence of aerial infection and the more intimate contact of the occupants.

Apart from the structural defects, there is no doubt that the death rate is largely determined by the number of occupants to a room. Russell has shown that in Aberdeen, where the average number of persons to each room was only 1.51 the mortality was 21.7 per 1,000, and in Glasgow, where the number of occupants amounted to 2.05 for each room the mortality reached 28.6 per 1,000.

According to Körösi the mortality from infectious diseases at Budapest is only 20 when the number of occupants to each room does not exceed 2, but is 29 per 1,000 with 3 to 5 occupants, 32 per 1,000 with 6 to 10 occupants, and 79 per 1,000 when there are more than 10 occupants to each apartment.

The death rate at Berlin in 1885 among the 73,000 one-room tenants was 163.5 per 1,000, against 5.4 per 1,000 among 398,000 residents occupying four or more room apartments. The analysis of 2,711 infantile deaths in Berlin during 1903 investigated by Neumann has been presented.

Insanitary dwellings are to be found everywhere, and particularly in older cities erected at a time when the principles of sanitation were comparatively unknown. One of the most important municipal problems is to correct existing evils by the enactment and enforcement of suitable laws. It requires, however, a strong public sentiment to bring about a complete and satisfactory reformation, as evidenced by the housing movement elsewhere, for in spite of the excellent tenement-house laws in New York, according to Homer Folks, of 370,000 dark rooms reported in existence by the tenement-house department in 1903, some 20,000 only have been opened to the light during the past three and one-half years. The prohibition against the use of cellar and basement rooms partly underground can not be enforced owing to the lack of a sufficient number of inspectors.([a])

HOUSE DISEASES.

It has long been known that rickets, scrofula, and chronic forms of tuberculosis are far more prevalent in dark, damp, and insanitary houses. The children are anæmic and as puny as plants reared without the stimulating effects of sunlight. Add to this the fact that dampness abstracts an undue amount of animal heat, lowers the power of resistance, and favors the development of catarrhal conditions, which render the system more vulnerable to tuberculosis, and we have a reasonable explanation why these diseases prevail especially in basements or houses below grade and otherwise unfit for human habitation. The death rate is often double or treble that of other localities, and while there are doubtless other factors which determine the frightful mortality the most potent are insufficient sunlight and defective ventilation. Diphtheria, cerebro-spinal meningitis, acute and chronic rheumatism, and bronchial affections are also more frequent in insanitary dwellings.

That the same is true of infantile diarrhea is doubtless due to the fact that the construction of the buildings does not protect from the heat of summer, and the enervating effects of heat and the more speedy decomposition of food (especially of milk) in such an atmosphere combine to carry on the slaughter of the innocents.

The history of improved dwellings reveals everywhere a lessened death rate, and the experience of the Washington Sanitary Improvement Company is equally gratifying. During the year ending December 31, 1906, the apartments were occupied by 778 adults and 380 children, total 1,158; the births during the year numbered 39, and there were only 16 deaths, 10 adults and 6 infants; a death rate of 13.8 per 1,000, which, with all due allowance for the average age of the occupants, shows a remarkably low mortality when compared with the general death rate among the white population of the city of 16.9 per 1,000.

The regeneration of the housing conditions for the least resourceful people is the great sanitary and social problem of the twentieth century.

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[a] Charities, November 30, 1907.

Take away the hovels and filthy places, let sunshine and pure air circulate through their homes, and teach them habits of cleanliness and responsibility, and the first step toward the elevation of the degraded and the education of the ignorant will be taken, not only in the warfare against tuberculosis and other diseases engendered by insanitary surroundings, but also in the battle for higher moral and social standards.

WHAT THE EMPLOYEE MAY DO TO CONTRIBUTE TO HIS OWN WELFARE.

Sufficient has been said in the preceding pages to indicate the dangers to which the workers are exposed in many industrial pursuits, and the methods proposed to alleviate the effects have also been pointed out. Wage-earners must show a willingness to avail themselves of the various "safety devices" and not underrate their importance in the protection of life and limb. While it is criminal for employers not to provide suitable protection, it is equally culpable on the part of the operatives to disregard all such preventive measures. So, for example, it is not a pleasing reflection to be told by Doctor Harrington, professor of hygiene at the Harvard Medical School, in speaking of respirators, that, "aside from the discomfort caused, the operatives have another, a senseless, objection to their use, women complaining that they are made to look ridiculous, and men being moved to discard them by the gibes of their more reckless fellows." The writer recently visited Frankford Arsenal and found men working in high explosives without rubber gloves and respirators, although provided by the Government with these articles. Doctor Farrand, secretary of the National Association for the Study and Prevention of Tuberculosis, also spoke of the great difficulties he and others have encountered in New York and New Jersey to induce the operatives to give safety devices a fair trial.

APPENDIX.—REGULATION OF DANGEROUS TRADES IN ENGLAND.

[In addition to the general provisions regarding ventilation, etc., which apply to all manufacturing establishments, the English Factory and Workshop Act (1901) contains a chapter of Special Provisions for dangerous and unhealthy industries, which is reprinted below, together with the Special Rules and Regulations issued by the government officials in accordance with the grant of authority therein made.]

FACTORY AND WORKSHOP ACT, 1901.

PART IV.—DANGEROUS AND UNHEALTHY INDUSTRIES.

(i) *Special provisions.*

SECTION 73. (1) Every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from lead, phosphorus, arsenical or mercurial poisoning, or anthrax, contracted in any factory or workshop, shall (unless the notice required by this subsection has been previously sent) send to the chief inspector of factories at the home office, London, a notice stating the name and full postal address of the patient and the disease from which, in the opinion of the medical practitioner, the patient is suffering, and shall be entitled in respect of every notice sent in pursuance of this section to a fee of two shillings and sixpence, to be paid as part of the expenses incurred by the secretary of state in the execution of this act.

(2) If any medical practitioner, when required by this section to send a notice, fails forthwith to send the same, he shall be liable to a fine not exceeding forty shillings.

(3) Written notice of every case of lead, phosphorus, arsenical or mercurial poisoning, or anthrax, occurring in a factory or workshop, shall forthwith be sent to the inspector and to the certifying surgeon for the district; and the provisions of this act with respect to accidents shall apply to any such case in like manner as to any such accident as is mentioned in those provisions.

(4) The secretary of state may, by special order, apply the provisions of this section to any other disease occurring in a factory or workshop, and thereupon this section and the provisions referred to therein shall apply accordingly.

SEC. 74. If in a factory or workshop where grinding, glazing, or po ot be wheel, or any process is carried on by which dust, or any gas, vapor, or s. (a) ity, is generated and inhaled by the workers to an injurious extent, it ap inspector that such inhalation could be to a great extent prevented by th fan or other mechanical means, the inspector may direct that a fan or other me. means of a proper construction for preventing such inhalation be provided w of reasonable time, and if the same is not provided, maintained and used, the fac. or workshop shall be deemed not to be kept in conformity with this act.

SEC. 75. (1) In every factory or workshop where lead, arsenic or any other poisonous substance is used, suitable washing conveniences must be provided for the use of the persons employed in any department where such substances are used.

(2) In any factory or workshop where lead, arsenic, or other poisonous substance is so used as to give rise to dust or fumes, a person shall not be allowed to take a meal or to remain during the times allowed to him for meals, in any room in which any such substance is used, and suitable provision shall be made for enabling the persons employed in such rooms to take their meals elsewhere in the factory or workshop.

(3) A factory or workshop in which there is a contravention of this section shall be deemed not to be kept in conformity with this act.

SEC. 76. (1) A woman, young person or child must not be employed in any part of a factory in which wet-spinning is carried on, unless sufficient means are employed and continued for protecting the workers from being wetted, and where hot water is used for preventing the escape of steam into the room occupied by the workers.

(2) A factory in which there is a contravention of this section shall be deemed not to be kept in conformity with this act.

SEC. 77. (1) In the part of a factory or workshop in which there is carried on—

(a) the process of silvering of mirrors by the mercurial process; or

(b) the process of making white lead,

a young person or child must not be employed.

(2) In the part of a factory in which the process of melting or annealing glass is carried on a female, young person, or a child must not be employed.

(3) In a factory or workshop in which there is carried on—

(a) the making or finishing of bricks or tiles not being ornamental tiles; or

(b) the making or finishing of salt,

a girl under the age of sixteen years must not be employed.

(4) In the part of a factory or workshop in which there is carried on—

(a) any dry grinding in the metal trade; or

(b) the dipping of lucifer matches,

a child must not be employed.

(5) Notice of a prohibition contained in this section must be affixed in the factory or workshop to which it applies.

SEC. 78. (1) A woman, young person or child must not be allowed to take a meal, or to remain during the time allowed for meals in the following factories or workshops, or parts of factories or workshops; that is to say,—

(a) in the case of glass works, in any part in which the materials are mixed; and

(b) in the case of glass works where flint glass is made, in any part in which the work of grinding, cutting, or polishing is carried on; and,

(c) in the case of lucifer-match works, in any part in which any manufacturing process or handicraft (except that of cutting the wood) is usually carried on; and

(d) in the case of earthenware works, in any part known or used as dippers house, dippers drying room, or china scouring room.

(2) If a woman, young person, or child is allowed to take a meal or to remain during the time allowed for meals in a factory or workshop or part thereof in contravention of this section, the woman, young person, or child shall be deemed to be employed contrary to the provisions of this act.

(3) Notice of the prohibition of this section shall be affixed in every factory or workshop to which it applies.

(4) Where it appears to the secretary of state that by reason of the nature of the process in any class of factories or workshops or parts thereof not named in this section the taking of meals therein is specially injurious to health, he may, if he thinks fit, by special order, extend the prohibition in this section to the class of factories or workshops or parts thereof.

(5) If the prohibition in this section is proved to the satisfaction of the secretary of state to be no longer necessary for the protection of the health of women, young persons, and children, in any class of factories or workshops or parts thereof to which it has been so extended, he may, by special order, rescind the order of extension, without prejudice to the subsequent making of another order.

(ii) Regulations for dangerous trades.

SEC. 79. Where the secretary of state is satisfied that any manufacture, machinery, process, or description of manual labor, used in factories or workshops, is dangerous or injurious to health or dangerous to life or limb, either generally or in the case of women, children, or any other class of persons, he may certify that manufacture, machinery, plant, process, or description of manual labor, to be dangerous; and thereupon the secretary of state may, subject to the provisions of this act, make such regulations as appear to him to be reasonably practicable, and to meet the necessity of the case.

SEC. 80. (1) Before the secretary of state makes any regulations under this act, he shall publish, in such manner as he may think best adapted for informing persons affected, notice of the proposal to make the regulations, and of the place where copies of the draft regulations may be obtained, and of the time (which shall be not less than twenty-one days) within which any objection made with respect to the draft regulations by or on behalf of persons affected must be sent to the secretary of state.

(2) Every objection must be in writing and state—

(*a*) the draft regulations or portions of draft regulations objected to;

(*b*) the specific grounds of objection; and

(*c*) the omissions, additions, or modifications asked for.

(3) The secretary of state shall consider any objection made by or on behalf of any persons appearing to him to be affected which is sent to him within the required time, and he may, if he thinks fit, amend the draft regulations, and shall then cause the amended draft to be dealt with in like manner as an original draft.

(4) Where the secretary of state does not amend or withdraw any draft regulations to which any objection has been made, then (unless the objection either is withdrawn or appears to him to be frivolous) he shall, before making the regulations, direct an inquiry to be held in the manner hereinafter provided.

SEC. 81. (1) The secretary of state may appoint a competent person to hold an inquiry with regard to any draft regulations, and to report to him thereon.

(2) The inquiry shall be held in public, and the chief inspector and any objector and any other person who, in the opinion of the person holding the inquiry, is affected by the draft regulations, may appear at the inquiry either in person or by counsel, solicitor, or agent.

(3) The witnesses on the inquiry may, if the person holding it thinks fit, be examined on oath.

(4) Subject as aforesaid, the inquiry and all proceedings preliminary and incidental thereto shall be conducted in accordance with rules made by the secretary of state.

(5) The fee to be paid to the person holding the inquiry shall be such as the secretary of state may direct, and shall be deemed to be part of the expenses of the secretary of state in the execution of this act.

SEC. 82. (1) The regulations made under the foregoing provisions of this act may apply to all the factories and workshops in which the manufacture, machinery, plant, process, or description of manual labor, certified to be dangerous is used (whether existing at the time when the regulations are made or afterwards established) or to any specified class of such factories or workshop. They may provide for the exemption of any specified class or factories or workshops either absolutely or subject to conditions.

(2) The regulations may apply to tenement factories and tenement workshops, and in such case may impose duties on occupiers who do not employ any person, and on owners.

(3) No person shall be precluded by any agreement from doing, or be liable under any agreement to any penalty or forfeiture for doing, such acts as may be necessary in order to comply with the provisions of any regulation made under this act.

Sec. 83. Regulations made under the foregoing provisions of this act may, among other things—

(a) prohibit the employment of, or modify or limit the period of employment of, all persons or any class of persons in any manufacture, machinery, plant, process, or description of manual labor certified to be dangerous; and

(b) prohibit, limit, or control the use of any material or process; and

(c) modify or extend any special regulations for any class of factories or workshops contained in this act.

Sec. 84. Regulations made under the foregoing provisions of this act shall be laid as soon as possible before both Houses of Parliament, and if either House within the next forty days after the regulations have been laid before that House, resolve that all or any of the regulations ought to be annulled, the regulations shall, after the date of the resolution, be of no effect, without prejudice to the validity of anything done in the meantime thereunder, or to the making of any new regulations. If one or more of a set of regulations are annulled, the secretary of state may, if he thinks fit, withdraw the whole set.

Sec. 85. (1) If any occupier, owner, or manager, who is bound to observe any regulation under this act, acts in contravention of or fails to comply with the regulation, he shall be liable for each offense to a fine not exceeding ten pounds [$48.67] and, in the case of a continuing offense, to a fine not exceeding two pounds [$9.73] for every day during which the offense continues after conviction therefor.

(2) If any person other than an occupier, owner, or manager, who is bound to observe any regulation under this act, acts in contravention of, or fails to comply with, the regulation, he shall be liable for each offense to a fine not exceeding two pounds [$9 73]; and the occupier of the factory or workshop shall also be liable to a fine not exceeding ten pounds [$48.67], unless he proves that he has taken all reasonable means by publishing, and to the best of his power enforcing, the regulations to prevent the contravention or noncompliance.

Sec. 86. (1) Notice of any regulations having been made under the foregoing provisions of this act, and of the place where copies of them can be purchased, shall be published in the London, Edinburgh, and Dublin Gazettes.

(2) Printed copies of all regulations for the time being in force under this act in any factory or workshop shall be kept posted up in legible characters in conspicuous places in the factory or workshop where they may be conveniently read by the persons employed. In a factory or workshop in Wales or Monmouthshire the regulations shall be posted up in the Welsh language also.

(3) A printed copy of all such regulations shall be given by the occupier to any person affected thereby on his or her application.

(4) If the occupier of any factory or workshop fails to comply with any provision of this section as to posting up or giving copies, he shall be liable to a fine not exceeding ten pounds [$48.67].

(5) Every person who pulls down, injures, or defaces any regulations posted up in pursuance of this act, or any notice posted up in pursuance of the regulations, shall be liable to a fine not exceeding five pounds [$24.33].

(6) Regulations for the time being in force under this act shall be judicially noticed.

SPECIAL RULES AND REGULATIONS.

White lead factories.
Red and orange lead works.
Yellow lead works.
Lead smelting works.
Factories using yellow chromate of lead.
Earthenware and china works.
Electric accumulator factories (regulations).
Iron-plate enameling works (using lead, arsenic, or antimony).
Tinning and enameling works (using lead or arsenic).
Paint and color works (extraction of arsenic).
Brass and compound metal mixing or casting shops.
Chemical works.
Bichromate or chromate of potassium or sodium works.
Explosive works (using di-nitro-benzole).
Vulcanized india-rubber works (using bisulphide of carbon).
Lucifer match factories using white or yellow phosphorus.

Felt hat factories (regulations).
Handling of dry and drysalted hides and skins imported from Asia.
Wool and hair sorting (regulations).
Flax and tow spinning and weaving (regulations).
File cutting by hand (regulations).
Bottling of aerated water.
Spinning by self-acting mules (regulations).
Loading goods on docks and wharves (regulations).
Use of factory engines and cars (regulations).

WHITE LEAD FACTORIES.

(Form 247—February, 1903.)

In these rules "person employed in a lead process" means a person who is employed in any work or process involving exposure to white lead, or to lead or lead compounds used in its manufacture, or who is admitted to any room or part of the factory where such process is carried on.

Any approval given by the chief inspector of factories in pursuance of rules 2, 4, 6, 9, and 12 shall be given in writing, and may at any time be revoked by notice in writing signed by him.

Duties of occupiers.

1. On and after July 1st, 1899, no part of a white lead factory shall be constructed, structurally altered, or newly used, for any process in which white lead is manufactured or prepared for sale, unless the plans have previously been submitted to and approved in writing by the chief inspector of factories.

2. (*a*) Every stack shall be provided with a standpipe and movable hose, and an adequate supply of water distributed by a hose.

(*b*) Every white bed shall, on the removal of the covering boards, be effectually damped by the means mentioned above.

Where it is shown to the satisfaction of the chief inspector of factories that there is no available public water service in the district, it shall be a sufficient compliance with this rule if each white bed is, on the removal of the covering boards, effectually damped by means of a watering can.

3. Where white lead is made by the chamber process, the chamber shall be kept moist while the process is in operation, and the corrosions shall be effectually moistened before the chamber is emptied.

4. (*a*) Corrosions shall not be carried except in trays of impervious material.

(*b*) No person shall be allowed to carry on his head or shoulder a tray of corrosions which has been allowed to rest directly upon the corrosions, or upon any surface where there is white lead

(*c*) All corrosions before being put into the rollers or washbecks, shall be effectually damped, either by dipping the tray containing them in a trough of water or by some other method approved by the chief inspector of factories.

5. The flooring round the rollers shall either be of smooth cement or be covered with sheet lead, and shall be kept constantly moist.

6. On and after January 1st, 1901, except as hereinafter provided—

(*a*) Every stove shall have a window, or windows, with a total area of not less than 8 square feet, made to open, and so placed as to admit of effectual through ventilation.

(*b*) In no stove shall bowls be placed on a rack which is more than 10 feet from the floor.

(*c*) Each bowl shall rest upon the rack and not upon another bowl.

(*d*) No stove shall be entered for the purpose of drawing until the temperature at a height of 5 feet from the floor has fallen either to 70° F., or to a point not more than 10° F. above the temperature of the air outside.

(*e*) In drawing any stove or part of a stove there shall not be more than one stage or standing place above the level of the floor.

Provided that if the chief inspector approves of any other means of ventilating a stove, as allowing of effectual through ventilation, such means may be adopted, notwithstanding paragraph (*a*) of this rule; and if he approves of any other method of setting and drawing the stoves, as effectually preventing white lead from falling upon any worker, such method may be followed, notwithstanding paragraphs (*b*) and (*c*) of this rule.

7. No person shall be employed in drawing Dutch stoves on more than two days in any week.

8. No dry white lead shall be deposited in any place that is not provided either with a cover or with a fan effectually removing the dust from the worker.

9. On and after January 1st, 1900, the packing of dry white lead shall be done only under conditions which secure the effectual removal of dust, either by exhaust fans or by other efficient means approved in each case by the chief inspector of factories.

This rule shall not apply where the packing is effected by mechanical means entirely closed in.

10. The floor of any place where packing of dry white lead is carried on shall be of cement, or of stone set in cement.

11 No woman shall be employed or allowed in the white beds, rollers, washbecks, or stoves, or in any place where dry white lead is packed, or in other work exposing her to white lead dust.

12. (a) A duly qualified medical practitioner (in these rules referred to as the "appointed surgeon") shall be appointed by the occupier for each factory, such appointment to be subject to the approval of the chief inspector.

(b) No person shall be employed in a lead process for more than a week without a certificate of fitness granted after examination by the appointed surgeon.

(c) Every person employed in a lead process shall be examined once a week by the appointed surgeon, who shall have power to order suspension from employment in any place or process

(d) No person after such suspension shall be employed in a lead process without the written sanction of the appointed surgeon

(e) A register in a form approved by the chief inspector of factories shall be kept, and shall contain a list of all persons employed in lead processes. The appointed surgeon will enter in the register the dates and results of his examinations of the persons employed, and particulars of any directions given by him. The register shall be produced at any time when required by H. M inspectors of factories or by the certifying surgeon or by the appointed surgeon

13. Upon any person employed in a lead process complaining of being unwell, the occupier shall, with the least possible delay, give an order upon a duly qualified medical practitioner.

14. The occupier shall provide and maintain sufficient and suitable respirators, overalls, and head-coverings, and shall cause them to be worn as directed in rule 29.

At the end of every day's work they shall be collected and kept in proper custody in a suitable place set apart for the purpose.

They shall be thoroughly washed or renewed every week, and those which have been used in the stoves, and all respirators, shall be washed or renewed daily.

15. The occupier shall provide and maintain a dining-room and a cloakroom in which workers can deposit clothing put off during working hours.

16. No person employed in a lead process shall be allowed to prepare or partake of any food or drink except in the dining-room or kitchen

17. A supply of a suitable sanitary drink, to be approved by the appointed surgeon shall be kept for the use of the workers.

18. The occupier shall provide and maintain a lavatory for the use of the workers, with soap, nailbrushes, and at least one lavatory basin for every five persons employed. Each such basin shall be fitted with a waste pipe There shall be a constant supply of hot and cold water laid on, except where there is no available public water service, in which case the provision of hot and cold water shall be such as shall satisfy the inspector in charge of the district.

The lavatory shall be thoroughly cleaned and supplied with clean towels after every meal.

There shall, in addition, be means of washing in close proximity to the workers of each department, if required by notice in writing from the inspector in charge of the district.

There shall be facilities, to the satisfaction of the inspector in charge of the district, for the workers to wash out their mouths.

19. Before each meal, and before the end of the day's work, at least ten minutes in addition to the regular meal times, shall be allowed to each worker for washing.

A notice to this effect shall be affixed in each department.

20. The occupier shall provide and maintain sufficient baths and dressing rooms for all persons employed in lead processes, with hot and cold water, soap and towels, and shall cause each such person to take a bath once a week at the factory.

A bath register shall be kept, containing a list of all persons employed in lead processes, and an entry of the date when each person takes a bath.

This register shall be produced at any time when required by H. M. inspectors of factories or by the certifying surgeon or by the appointed surgeon.

21. The dressing rooms, baths, and water-closets shall be cleaned daily.

22. The floor of each workroom shall be cleaned daily, after being thoroughly damped.

Duties of persons employed.

23. No person shall strip a white bed or empty a chamber without previously effectually damping as directed in Rules 2 and 3.

24. No person shall carry corrosions, or put them into the rollers or washbecks, otherwise than as permitted by Rule 4.

25. No person shall set or draw a stove otherwise than as permitted by Rules 6 and 7.

26. No person shall deposit or pack dry white lead otherwise than as permitted by Rules 8 and 9.

27. Every person employed in a lead process shall present himself at the appointed times for examination by the appointed surgeon, as provided in Rule 12.

28. No person, after suspension by the appointed surgeon, shall work in a lead process without his written sanction.

29. Every person engaged in [stripping] white beds, emptying chambers, rollers, washbecks or grinding, setting or drawing stoves, packing, paint mixing, handling dry white lead, or in any work involving exposure to white-lead dust, shall, while so occupied, wear an overall suit and head covering

Every person engaged in stripping white beds, or in emptying chambers, or in drawing stoves, or in packing, shall in addition wear a respirator while so occupied.

30. Every person engaged in any place or process named in Rule 29 shall, before partaking of meals or leaving the premises, deposit the overalls, head coverings, and respirators in the place appointed by the occupier for the purpose, and shall thoroughly wash face and hands in the lavatory.

31. Every person employed in a lead process shall take a bath at the factory at least once a week, and wash in the lavatory before bathing; having done so, he shall at once sign his name in the bath register, with the date.

32. No person employed in a lead process shall smoke or use tobacco in any form, or partake of food or drink, elsewhere than in the dining room or kitchen.

33. No person shall in any way interfere, without the knowledge and concurrence of the occupier or manager, with the means and appliances provided for the removal of dust.

34. The foreman shall report to the manager, and the manager shall report to the occupier, any instance coming under his notice of a worker neglecting to observe these rules.

35. No person shall obtain employment under an assumed name or under any false pretense.

ARTHUR WHITELEGGE,
Chief Inspector of Factories.
M. W. RIDLEY,
One of Her Majesty's Principal Secretaries of State.

1ST JUNE, 1899.

NOTE.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so, or acts in contravention of them, is liable to a penalty; and in such cases the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing, and to the best of his power, enforcing the rules, to prevent the contravention or noncompliance. (Factory and Workshop Act, 1901, sections 85 and 86.)

RED AND ORANGE LEAD WORKS.

(Form 261—February, 1904.)

Duties of occupiers.

In drawing charges of massicot, or of red lead, or of orange lead, from the furnace they shall not allow the charges of massicot, or of red lead, or of orange lead, to be discharged on to the floor of the factory or workshop, but shall arrange that it be shoveled, not raked, into wagons.

They shall arrange that no red or orange lead shall be packed in the room or rooms where the manufacture is actually carried on.

They shall arrange that no red or orange lead shall be packed in casks or other receptacles except in a place provided with a hood connected with a fan, or shall provide other suitable means to create an effective draft.

They shall provide sufficient bath accommodation for all persons employed in the manipulation of red and orange lead, and lavatories, with a good supply of hot water, soap, nailbrushes, and towels for the use of such persons.

They shall arrange for a monthly visit by a medical man who shall examine every worker individually, and who shall enter the result of each examination in a register book to be provided by the said occupiers.

They shall provide a sufficient supply of approved sanitary drink for the workers.

Duties of persons employed.

In cases where the cooperation of the workers is required for carrying out the foregoing rules, and where such cooperation is not given, the workers shall be held liable in accordance with the Factory and Workshop Act, 1891, section 9, which runs as follows:

"If any person who is bound to observe any special rules established for any factory or workshop under this act, acts in contravention of, or fails to comply with, any such special rule, he shall be liable on summary conviction to a fine not exceeding two pounds [$9.73]."

YELLOW LEAD.

(Form 263—February, 1904.)

Duties of occupiers.

They shall provide washing conveniences, with a sufficient supply of hot and cold water, soap, nailbrushes, and towels.

They shall provide respirators and overall suits for the persons employed in all dry processes.

They shall provide fans or other suitable means of ventilation wherever dust is generated in the process of manufacture.

They shall provide a sufficient supply of epsom salts and of an approved sanitary drink.

Duties of persons employed.

In cases where the cooperation of the workers is required for carrying out the foregoing rules and where such cooperation is not given, the workers shall be held liable, in accordance with the Factory and Workshop Act, 1891, section 9, which runs as follows:

"If any person who is bound to observe any special rules established for any factory or workshop under this act, acts in contravention of, or fails to comply with, any such special rule, he shall be liable on summary conviction to a fine not exceeding two pounds [$9.73]."

Respirators: A good respirator is a cambric bag with or without a thin flexible wire made to fit over the nose.

Sanitary drink suggested. Sulphate of magnesia, 2 ozs.; water, 1 gallon; essence of lemon, sufficient to flavor.

LEAD SMELTING WORKS.

(Form 264—January, 1906.)

Duties of occupiers.

They shall provide respirators and overall suits for the use of all persons employed in cleaning the flues, and take means to see that the same are used.

They shall arrange that no person be allowed to remain at work more than two hours at a time in a flue. (A rest of half an hour before reentering will be deemed sufficient.)

They shall provide sufficient bath accommodation for all persons employed in cleaning the flues, and every one so employed shall take a bath before leaving the works.

They shall provide washing conveniences, with a sufficient supply of hot and cold water, soap, nailbrushes and towels.

Duties of persons employed.

In cases where the cooperation of the workers is required for carrying out the foregoing rules, and where such cooperation is not given, the workers shall be held liable, in accordance with the Factory and Workshop Act, 1891, section 9, which runs as follows:

"If any person who is bound to observe any special rules established for any factory or workshop under this act, acts in contravention of, or fails to comply with, any such special rule, he shall be liable on summary conviction to a fine not exceeding two pounds [$9.73]."

SPECIAL RULES FOR FACTORIES OR WORKSHOPS IN WHICH YELLOW CHROMATE OF LEAD IS USED, OR IN WHICH GOODS DYED WITH IT UNDERGO THE PROCESSES OF BUNDLING OR NODDLING, WINDING, REELING, WEAVING OR ANY OTHER TREATMENT.

(Form 270—February, 1904.)

Duties of occupiers.

They shall provide washing conveniences, with a sufficient supply of hot and cold water, soap, nailbrushes, and towels.

They shall provide respirators and overall suits for the persons employed in all dry processes.

They shall provide fans or other suitable means of ventilation wherever dust is generated in the process of manufacture.

They shall provide a sufficient supply of epsom salts and of the sanitary drink mentioned below or some other approved by H. M. inspector of factories.

Respirators: A good respirator is a cambric bag with or without a thin flexible wire made to fit over the nose.

Sanitary drink: Sulphate of magnesia, 2 ozs.; water, 1 gallon; essence of lemon, sufficient to flavor.

Duties of persons employed.

Every person to whom is supplied a respirator or overall suit shall wear the same when at the special work for which such are provided.

Every person shall carefully clean and wash hands and face before meals and before leaving the works.

No food shall be eaten in any part of the works in which yellow chromate of lead is used in the manufacture.

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

Under section 9, Factory Act, 1891, any person who is bound to observe any special rules is liable to penalties for noncompliance with such special rules.

AMENDED SPECIAL RULES FOR THE MANUFACTURE AND DECORATION OF EARTHENWARE AND CHINA.

As established, after arbitration, by the awards of the umpire, Lord James of Hereford, dated 30th of December, 1901, and 28th of November, 1903.

(Form 923—October, 1905.)

Duties of occupiers.

1. Deleted.

2. After the 1st day of February, 1904, no glaze shall be used which yields to a dilute solution of hydrochloric acid more than five per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described below.

A weighed quantity of dried material is to be continuously shaken for one hour, at the common temperature, with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent of HCl. This solution is thereafter to be allowed to stand for one hour and to be passed through a filter. The lead salt contained in an aliquot portion of the clear filtrate is then to be precipitated as lead sulphide and weighed as lead sulphate.

If any occupier shall give notice in writing to the inspector for the district that he desires to use glaze which does not conform to the above-mentioned conditions, and to adopt in his factory the scheme of compensation prescribed in Schedule B and shall affix and keep the same affixed in his factory, the above provisions shall not apply to his factory but instead thereof the following provisions shall apply.

All persons employed in any process included in Schedule A other than china scouring shall be examined before the commencement of their employment or at the first subsequent visit of the certifying surgeon, and once in each calendar month by the certifying surgeon of the district.

The certifying surgeon may at any time order by signed certificate the suspension of any such person from employment in any process included in Schedule A other than china scouring, if such certifying surgeon is of opinion that such person by continuous work in lead will incur special danger from the effects of plumbism, and no person after such suspension shall be allowed to work in any process included in Schedule A other than china scouring without a certificate of fitness from the certifying surgeon entered in the register.

Any workman who, by reason of his employment being intermittent or casual, or of his being in regular employment for more than one employer, is unable to present himself regularly for examination by the certifying surgeon, may procure himself at his own expense to be examined once a month by a certifying surgeon, and such examination shall be a sufficient compliance with this rule. The result of such examination shall be entered by the certifying surgeon in a book to be kept in the possession of the workman. He shall produce and show the said book to a factory inspector or to any employer on demand, and he shall not make any entry or erasure therein.

If the occupier of any factory to which this rule applies fails duly to observe the conditions of the said scheme, or if any such factory shall by reason of the occurrence of cases of lead poisoning appear to the secretary of state to be in an unsatisfactory condition, he may, after an inquiry, at which the occupier shall have an opportunity of being heard, prohibit the use of lead for such time and subject to such conditions as he may prescribe.

All persons employed in the processes included in Schedule A other than china scouring shall present themselves at the appointed time for examination by the certifying surgeon, as provided in this rule.

In addition to the examinations at the appointed times, any person so employed may at any time present himself to the certifying surgeon for examination, and shall be examined on paying the prescribed fee.

All persons shall obey any directions given by the certifying surgeon.

No person after suspension by the certifying surgeon shall work in any process included in Schedule A other than china scouring without a certificate of fitness from the certifying surgeon entered in the register. Any operative who fails without reasonable cause to attend any monthly examination shall procure himself, at his own expense, to be examined within 14 days thereafter by the certifying surgeon, and shall himself pay the prescribed fee.

A register, in the form which has been prescribed by the secretary of state for use in earthenware and china works, shall be kept, and in it the certifying surgeon shall enter the dates and results of his visits, the number of persons examined, and particulars of any directions given by him. This register shall contain a list of all persons employed in the processes included in Schedule A, or in emptying china biscuit ware, and shall be produced at any time when required by His Majesty's inspector of factories or by the certifying surgeon.

3. The occupier shall allow any of His Majesty's inspectors of factories to take at any time sufficient samples for analysis of any material in use or mixed for use.

Provided that the occupier may at the time when the sample is taken, and on providing the necessary appliances, require the inspector to take, seal, and deliver to him a duplicate sample.

But no analytical result shall be disclosed or published in any way except such as shall be necessary to establish a breach of these rules.

4. No woman, young person, or child shall be employed in the mixing of unfritted lead compounds in the preparation or manufacture of frits, glazes, or colors.

5. No person under 15 years of age shall be employed in any process included in Schedule A, or in emptying china biscuit ware.

Thimble-picking, or threading-up, or looking-over biscuit ware shall not be carried on except in a place sufficiently separated from any process included in Schedule A.

6. All women and young persons employed in any process included in Schedule A shall be examined once in each calendar month by the certifying surgeon for the district.

The certifying surgeon may order by signed certificate in the register the suspension of any such women or young persons from employment in any process included in Schedule A, and no person after such suspension shall be allowed to work in any process included in Schedule A without a certificate of fitness from the certifying surgeon entered in the register.

7. A register, in the form which has been prescribed by the secretary of state for use in earthenware and china works, shall be kept, and in it the certifying surgeon shall enter the dates and results of his visits, the number of persons examined in pursuance of Rule 6 as amended, and particulars of any directions given by him. This register shall contain a list of all persons employed in the processes included in Schedule A, or in emptying china biscuit ware, and shall be produced at any time when required by H. M. inspector of factories or by the certifying surgeon.

8. The occupier shall provide and maintain suitable overalls and head coverings for all women and young persons employed in the processes included in the Schedule A, or in emptying china biscuit ware.

No person shall be allowed to work in any process included in the schedule, or in emptying china biscuit ware, without wearing suitable overalls and head coverings, provided that nothing in this rule shall render it obligatory on any person engaged in drawing glost ovens to wear overalls and head coverings.

All overalls, head coverings, and respirators, when not in use or being washed or repaired, shall be kept by the occupier in proper custody. They shall be washed or renewed at least once a week, and suitable arrangements shall be made by the occupier for carrying out these requirements.

A suitable place, other than that provided for the keeping of overalls, head coverings, and respirators, in which all the above workers can deposit clothing put off during working hours, shall be provided by the occupier.

Each respirator shall bear the distinguishing mark of the worker to whom it is supplied.

9. No person shall be allowed to keep, or prepare, or partake of any food, or drink, or tobacco, or to remain during meal times in a place in which is carried on any process included in Schedule A.

The occupier shall make suitable provision to the reasonable satisfaction of the inspector in charge of the district for the accommodation during meal times of persons employed in such places or processes, with a right of appeal to the chief inspector of factories. Such accommodation shall not be provided in any room or rooms in which any process included in Schedule A is carried on, and no washing conveniences mentioned hereafter in Rule 13 shall be maintained in any room or rooms provided for such accommodation.

Suitable provision shall be made for the deposit of food brought by the workers.

10. The processes of the towing of earthenware, china scouring, ground laying, ware cleaning after the dipper, color dusting, whether on-glaze or under-glaze, color blowing, whether on-glaze or under-glaze, glaze blowing, or transfer making, shall not be carried on without the use of exhaust fans, or other efficient means for the effectual removal of dust, to be approved in each particular case by the secretary of state, and under such conditions as he may from time to time prescribe.

In the process of ware cleaning after the dipper, sufficient arrangements shall be made for any glaze scraped off which is not removed by the fan, or the other efficient means, to fall into water.

In the process of ware cleaning of earthenware after the dipper, damp sponges or other damp material shall be provided in addition to the knife or other instrument, and shall be used wherever practicable.

Flat-knocking and fired-flint-sifting shall be carried on only in inclosed receptacles, which shall be connected with an efficient fan or other efficient draught unless so contrived as to prevent effectually the escape of injurious dust.

In all processes the occupier shall, as far as practicable, adopt efficient measures for the removal of dust and for the prevention of any injurious effects arising therefrom.

11. No person shall be employed in the mixing of unfritted lead compounds, in the preparation or manufacture of frits, glazes or colors containing lead without wearing a suitable and efficient respirator provided and maintained by the employer; unless the mixing is performed in a closed machine or the materials are in such a condition that no dust is produced.

Each respirator shall bear the distinguishing mark of the worker to whom it is supplied.

12. All drying stoves as well as all workshops and all parts of factories shall be effectually ventilated to the reasonable satisfaction of the inspector in charge of the district.

13. The occupier shall provide and continually maintain sufficient and suitable washing conveniences for all persons employed in the processes included in Schedule A, as near as practicable to the places in which such persons are employed.

The washing conveniences shall comprise soap, nailbrushes and towels, and at least one wash-hand basin for every five persons employed as above, with a constant supply of water laid on, with one tap at least for every two basins, and conveniences for emptying the same and running off the waste water on the spot down a waste pipe.

There shall be in front of each washing basin, or convenience, a space for standing room which shall not be less in any direction than 21 inches.

14. The occupier shall see that the floors of workshops and of such stoves as are entered by the work people are sprinkled and swept daily; that all dust, scraps, ashes, and dirt are removed daily, and that the mangles, workbenches, and stairs leading to workshops are cleansed weekly.

When so required by the inspector in charge of the district, by notice in writing, any such floors, mangles, workbenches, and stairs shall be cleansed in such manner and at such times as may be directed in such notice.

As regards every potters' shop and stove, and every place in which any process included in Schedule A is carried on, the occupier shall cause the sufficient cleansing of floors to be done at a time when no other work is being carried on in such room, and in the case of potters' shops, stoves, dipping houses, and majolica painting rooms, by an adult male.

Provided that in the case of rooms in which ground laying or glost placing is carried on, or in china dippers' drying room, the cleansing prescribed by this rule may be done before work commences for the day, but in no case shall any work be carried on in the room within one hour after any such cleansing as aforesaid has ceased.

15. The occupier shall cause the boards used in the dipping house, dippers' drying room, or glost placing shop to be cleansed every week, and shall not allow them to be used in any other department, except after being cleansed.

When so required by the inspector in charge of the district, by notice in writing, any such boards shall be washed at such times as may be directed in such notice.

Duties of persons employed.

16. All women and young persons employed in the processes included in Schedule A shall present themselves at the appointed time for examination by the certifying surgeon as provided in Rule 6 as amended.

No person after suspension by the certifying surgeon shall work in any process included in the schedule without a certificate of fitness from the certifying surgeon entered in the register.

17. Every person employed in any process included in Schedule A, or in emptying china biscuit ware, shall, when at work, wear a suitable overall and head covering, and also a respirator when so required by Rule 11 as amended, which shall not be worn outside the factory or workshop, and which shall not be removed therefrom except for the purpose of being washed or repaired. Such overall and head covering shall be in proper repair and duly washed.

The hair must be so arranged as to be fully protected from dust by the head covering.

The overalls, head coverings, and respirators when not being worn, and clothing put off during working hours, shall be deposited in the respective places provided by the occupier for such purposes under Rule 8 as amended.

18. No person shall remain during meal times in any place in which is carried on any process included in Schedule A, or introduce, keep, prepare, or partake of any food or drink or tobacco therein at any time.

19. No person shall in any way interfere, without the knowledge and concurrence of the occupier or manager, with the means and appliances provided by the employers for the ventilation of the workshops and stoves, and for the removal of dust.

20. No person included in any process included in Schedule A shall leave the works or partake of meals without previously and carefully cleaning and washing his or her hands.

No person employed shall remove or damage the washing basins or conveniences provided under Rule 13.

20a. The persons appointed by the occupiers shall cleanse the several parts of the factory regularly as prescribed in Rule 14.

Every worker shall so conduct his or her work as to avoid, as far as practicable, making or scattering dust, dirt, or refuse, or causing accumulation of such.

21. The boards used in the dipping house, dippers' drying room, or glost placing shop shall not be used in any other department, except after being cleansed, as directed in Rule 15.

EXEMPTION FOR PROCESSES IN WHICH NO LEAD OR OTHER POISONOUS MATERIAL IS USED.

22. If the occupier of a factory to which these rules apply gives with reference to any process included in Schedule A, other than china scouring, an undertaking that no lead or lead compound or other poisonous material shall be used, the chief inspector may approve in writing of the suspension of the operation of Rules 4, 5, 6, 7, 8, 15, 16, 17, and 21, or any of them in such process; and thereupon such rules shall be suspended as regards the process named in the chief inspector's approval, and in lieu thereof the following rule shall take effect, viz: No lead or lead compound or other poisonous material shall be used in any process so named.

For the purpose of this rule materials that contain no more than 1 per cent of lead shall be regarded as free from lead.

NOTE.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by persons employed. Any person who is bound to observe these rules and fails to do so, or acts in contravention to them, is liable to a penalty, and in such cases the occupier also is liable to a penalty unless he proves that he has taken all reasonable means, by publishing and to the best of his power enforcing the rules, to prevent the contravention or noncompliance.

SCHEDULE A.

Dipping or other process carried on in the dipping house,
Glaze blowing,
Painting in majolica or other glaze,
Drying after dipping,
Ware cleaning after the application of glaze by dipping or other process,
China scouring,
Glost placing,
Ground laying,
Color dusting } whether on-glaze or under-glaze,
Color blowing }
Lithographic transfer making,
Making or mixing of frits, glazes, or colors containing lead.

Any other process in which materials containing lead are used or handled in the dry state, or in the form of spray, or in suspension in liquid other than oil or similar medium.

SCHEDULE B.

NOTICE TO WORKMEN EMPLOYED IN PROCESS NAMED IN SCHEDULE A, OTHER THAN CHINA SCOURING.

Conditions of compensation.

1. Where a workman is suspended from working by a certifying surgeon of the district on the ground that he is of opinion that such person by continued work in lead will incur special danger from the effects of plumbism, and the certifying surgeon shall certify that in his opinion he is suffering from plumbism arising out of his employment, he shall, subject as hereinafter mentioned, be entitled to compensation from his employer as hereinafter provided.

(*a*) If any workman who has been suspended as aforesaid dies within nine calendar months from the date of such certificate of suspension, by reason of plumbism contracted before said date, there shall be paid to such of his dependants as are wholly dependent upon his earnings at the time of his death or upon the weekly compensation payable under this scheme, a sum equal to the amount he has earned during a period of three years next preceding the date of the said certificate, such sum not to be more than £300 [$1,459.95] nor less than £150 [$729.98] for an adult male, £100 [$486.65] for an adult female, and £75 [$364.99] for a young person.

(*b*) If the workman does not leave any dependants wholly dependent as aforesaid, but leaves any dependants in part dependent as aforesaid, a reasonable part of that sum.

(*c*) If he leaves no dependants, the reasonable expenses of his medical attendance and burial, not exceeding ten pounds [$48.67].

2. With respect to such payments the following provisions shall apply—

(*a*) All sums paid to the workmen as compensation since the date of the said certificate shall be deducted from the sums payable to the dependants.

(*b*) The payment shall, in case of death, be made to the legal personal representative of the workman, or, if he has no legal personal representative, to or for the benefit of his dependants, or, if he leaves no dependants, to the person to whom the expenses are due; and if made to the legal personal representative shall be paid by him to or for the benefit of the dependants or other person entitled thereto.

(*c*) Any question as to who is a dependant, or as to the amount payable to each dependant, shall in default of agreement be settled by arbitration as hereinafter provided in clause 9.

(*d*) The sum allotted as compensation to a dependant may be invested or otherwise applied for the benefit of the person entitled thereto, as agreed, or as ordered by the arbitrator.

(*e*) Any sum which is agreed or is ordered by the arbitrator to be invested may be invested in whole or in part in the post-office savings bank.

3. Where a workman has been suspended and certified as provided in Condition 1, and while he is totally or partially prevented from earning a living by reason of such suspension, he shall be entitled to a weekly payment not exceeding fifty per cent of his average weekly earnings at the time of such suspension, such payment not to exceed £1 [$4.87]. The average may be taken over such period, not exceeding twelve months, as appears fair or reasonable having regard to all the circumstances of the case.

4. In fixing these weekly payments, regard shall be had to the difference between the amount of the average weekly earnings of the workman at the time of his suspension

and the average amount, if any, which it is estimated that he will be able to earn afterwards in any occupation or employment, and to any payments (not being wages) which he may have received from the employer in respect of the suspension, and to all the circumstances of the case, including his age and expectation of life.

5. If it shall appear that any workman has persistently disobeyed the special rules or the directions given for his protection by his employers, and that such disobedience has conduced to his suspension, or has not presented himself for examination by the certifying surgeon, or has failed to give full information and assistance as provided in Condition 6, his conduct may be taken into consideration in assessing the amount of the weekly payments.

6. It shall be the duty of every workman at all times to submit to medical examination when required and to give full information to the certifying surgeon and to assist to the best of his power in the obtaining of all facts necessary to enable his physical condition to be ascertained.

7. Any weekly payment may be reviewed at the request either of the employer or of the workman, and on such review may be ended, diminished, or increased, subject to the maximum above provided, and the amount of payment shall, in default of agreement, be settled by arbitration.

8. Any workman receiving weekly payments under this scheme shall submit himself if required for examination by a duly qualified medical practitioner provided and paid by the employer.

If the workman refuses to submit himself to such examination or in any way obstructs the same, his right to such weekly payments shall be suspended until such examination has taken place.

9. If any dispute shall arise as to any certificate of the certifying surgeon or as to the amount of compensation payable as herein provided, or otherwise in relation to these provisions, the same shall be decided by an arbitrator to be appointed by the employer and workman, or in default of agreement by the secretary of state. The said arbitrator shall have all the powers of an arbitrator under the Arbitration Act, and his decision shall be final.

The fee of the arbitrator shall be fixed by the secretary of state, and shall be paid as the arbitrator shall direct.

10. No compensation shall be payable under these provisions unless notice of claim in writing is made within six weeks of the date of the certificate of suspension, or of the death, provided that the want of such notice shall not bar the claim if in the opinion of the arbitrator there was reasonable excuse for the want of it

A claim for compensation by any workman whose employment is intermittent, or casual, or who is regularly employed by more than one employer, shall only arise against the employers for whom he has worked in a process included in Schedule A within one month prior to his suspension. The said employers shall bear the compensation among them in such proportion as in default of agreement shall be determined by an arbitrator as herein provided.

11. "Employer" includes an occupier, a corporation, and the legal representatives of a deceased employer. "Workman" includes every person, male or female, whether his agreement be one of service or apprenticeship or otherwise, and is expressed or implied, orally, or in writing, and shall include the personal representatives of a deceased workman. "Dependants" has the same meaning as in the Workmen's Compensation Act, 1897.

The terms contained in this notice shall be deemed to be part of the contract of employment of all workmen in the above-named processes.

ELECTRIC ACCUMULATORS.

Whereas the manufacture of electric accumulators has been certified in pursuance of section 79 of the Factory and Workshop Act, 1901, to be dangerous;

I hereby, in pursuance of the powers conferred on me by that act, make the following regulations, and direct that they shall apply to all factories and workshops or parts thereof in which electric accumulators are manufactured.

In these regulations "lead process" means pasting, casting, lead burning, or any work involving contact with dry compounds of lead.

Any approval given by the chief inspector of factories in pursuance of these regulations shall be given in writing, and may at any time be revoked by notice in writing signed by him.

Duties of occupier.

1. Every room in which casting, pasting or lead burning is carried on shall contain at least 500 cubic feet of air space for each person employed therein, and in computing this air space, no height above 14 feet shall be taken into account.

These rooms and that in which the plates are formed, shall be capable of thorough ventilation. They shall be provided with windows made to open.

2. Each of the following processes shall be carried on in such manner and under such conditions as to secure effectual separation from one another and from any other process:—

(a) Manipulation of dry compounds of lead;
(b) Pasting;
(c) Formation, and lead burning necessarily carried on therewith;
(d) Melting down of old plates.

Provided that manipulation of dry compounds of lead carried on as in Regulation 5 (b) need not be separated from pasting.

3. The floors of the rooms in which manipulation of dry compounds of lead or pasting is carried on shall be of cement or similar impervious material, and shall be kept constantly moist while work is being done.

The floors of these rooms shall be washed with a hose pipe daily.

4. Every melting pot shall be covered with a hood and shaft so arranged as to remove the fumes and hot air from the workrooms.

Lead ashes and old plates shall be kept in receptacles specially provided for the purpose.

5. Manipulation of dry compounds of lead in the mixing of the paste or other processes, shall not be done except (a) in any apparatus so closed, or so arranged with an exhaust draft, as to prevent the escape of dust into the workroom; or, (b) at a bench provided with (1) efficient exhaust draft and air guide so arranged as to draw the dust away from the worker, and (2) a grating on which each receptacle of the compound of lead in use at the time shall stand

6. The benches at which pasting is done shall be covered with sheet lead or other impervious material, and shall have raised edges.

7. No woman, young person, or child shall be employed in the manipulation of dry compounds of lead or in pasting.

8. (a) A duly qualified medical practitioner (in these regulations referred to as the "appointed surgeon") who may be the certifying surgeon, shall be appointed by the occupier, such appointment unless held by the certifying surgeon to be subject to the approval of the chief inspector of factories.

(b) Every person employed in a lead process shall be examined once a month by the appointed surgeon, who shall have power to suspend from employment in any lead process.

(c) No person after such suspension shall be employed in a lead process without written sanction entered in the health register by the appointed surgeon. It shall be sufficient compliance with this regulation for a written certificate to be given by the appointed surgeon and attached to the health register, such certificate to be replaced by a proper entry in the health register at the appointed surgeon's next visit.

(d) A health register in a form approved by the chief inspector of factories shall be kept, and shall contain a list of all persons employed in lead processes. The appointed surgeon will enter in the health register the dates and results of his examinations of the persons employed and particulars of any directions given by him. He shall on a prescribed form furnish to the chief inspector of factories on the first day of January in each year a list of the persons suspended by him during the previous year, the cause and duration of such suspension, and the number of examinations made.

The health register shall be produced at any time when required by H. M. inspectors of factories or by the certifying surgeon or by the appointed surgeon.

9. Overalls shall be provided for all persons employed in manipulating dry compounds of lead or in pasting.

The overalls shall be washed or renewed once every week.

10. The occupier shall provide and maintain—

(a) A cloakroom in which workers can deposit clothing put off during working hours. Separate and suitable arrangements shall be made for the storage of the overalls required in Regulation 9.

(b) A dining room unless the factory is closed during meal hours.

11. No person shall be allowed to introduce, keep, prepare, or partake of any food, drink, or tobacco, in any room in which a lead process is carried on. Suitable provision shall be made for the deposit of food brought by the workers.

This regulation shall not apply to any sanitary drink provided by the occupier and approved by the appointed surgeon.

12. The occupier shall provide and maintain for the use of the persons employed in lead processes a lavatory, with soap, nailbrushes, towels, and at least one lavatory basin for every five such persons. Each such basin shall be provided with a waste pipe, or the basins shall be placed on a trough fitted with a waste pipe. There shall be a constant supply of hot and cold water laid on to each basin.

Or, in the place of basins the occupier shall provide and maintain troughs of enamel or similar smooth impervious material, in good repair, of a total length of two feet for every five persons employed, fitted with waste pipes, and without plugs, with a sufficient supply of warm water constantly available.

The lavatory shall be kept thoroughly cleansed and shall be supplied with a sufficient quantity of clean towels once every day.

13. Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person who has been employed in the manipulation of dry compounds of lead or in pasting.

Provided that if the lavatory accommodation specially reserved for such persons exceeds that required by Regulation 12, the time allowance may be proportionately reduced, and that if there be one basin or two feet of trough for each such person this regulation shall not apply.

14. Sufficient bath accommodation shall be provided for all persons engaged in the manipulation of dry compounds of lead or in pasting, with hot and cold water laid on, and a sufficient supply of soap and towels.

This rule shall not apply if in consideration of the special circumstances of any particular case, the chief inspector of factories approves the use of local public baths when conveniently near, under the conditions (if any) named in such approval.

15. The floors and benches of each workroom shall be thoroughly cleansed daily at a time when no other work is being carried on in the room.

Duties of persons employed.

16. All persons employed in lead processes shall present themselves at the appointed times for examination by the appointed surgeon as provided in Regulation 8.

No person after suspension shall work in a lead process, in any factory or workshop in which electric accumulators are manufactured, without written sanction entered in the health register by the appointed surgeon.

17. Every person employed in the manipulation of dry compounds of lead or in pasting shall wear the overalls provided under Regulation 9. The overalls, when not being worn, and clothing put off during working hours, shall be deposited in the places provided under Regulation 10.

18. No person shall introduce, keep, prepare, or partake of any food, drink (other than any sanitary drink provided by the occupier and approved by the appointed surgeon), or tobacco in any room in which a lead process is carried on.

19. No person employed in a lead process shall leave the premises or partake of meals without previously and carefully cleaning and washing the hands.

20. Every person employed in the manipulation of dry compounds of lead or in pasting shall take a bath at least once a week.

21. No person shall in any way interfere, without the concurrence of the occupier or manager, with the means and appliances provided for the removal of the dust or fumes, and for the carrying out of these regulations.

These regulations shall come into force on the 1st day of January, 1904.

A. Akers-Douglas,
One of His Majesty's Principal Secretaries of State.

Home Office, *Whitehall, 21st November, 1903.*

Works or Parts of Works, in Which Lead, Arsenic, or Antimony is Used in the Enameling of Iron Plates.

(Form 251—January, 1906.)

Duties of occupiers.

1. They shall provide washing conveniences with a sufficient supply of hot and cold water, soap, nailbrushes, and towels, and take measures to secure that every worker wash face and hands before meals and before leaving the works.

2. They shall provide suitable respirators, overall suits, and head coverings for all workers employed in the processes of grinding, dusting, and brushing.

3. They shall adopt measures on and after the first day of October, 1894, in the dusting and brushing processes for the removal of all superfluous dust, by the use of perforated benches or tables supplied with fans to carry the dust down through the apertures of such benches or tables, the under part of which must be boxed in.

4. They shall provide a sufficient supply of approved sanitary drink, and shall cause the work people to take it.

5. They shall arrange for a medical inspection of all persons employed, at least once a month.

They shall see that no female is employed without previous examination and a certificate of fitness from the medical attendant of the works.

They shall see that no person who has been absent from work through illness shall be reemployed without a medical certificate to the effect that he or she has recovered.

6. Upon any person employed in the works complaining of being unwell, the occupier shall, with the least possible delay, and at his own expense, give an order upon a doctor for professional attendance and medicine. It is to be understood that this rule will not apply to persons suffering from complaints which have not been contracted in the process of manufacture.

7. They shall provide a place or places free from dust and damp in which the operatives can hang up the clothes in which they do not work.

(It is recommended that they shall provide for each female before the day's work begins some light refreshment, such as a half pint of milk and a biscuit.)

Duties of persons employed.

[illegible] Every person to whom is supplied a respirator or overall and head covering shall wear the same when at the work for which such are provided.

9. Every person shall carefully clean and wash hands and face before meals and before leaving the works.

10. No food shall be eaten by any person in any part of the works except in the apartment specially provided for the purpose.

11. No person may seek employment under an assumed name or under any false pretense.

Respirators: A good respirator is a cambric bag with or without a thin flexible wire made to fit over the nose.

Sanitary drink suggested: Sulphate of magnesia, 2 oz.; water, 1 gallon; essence of lemon, sufficient to flavor.

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

NOTE.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so or acts in contravention of them, is liable to a penalty, and in such case the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing, and to the best of his power, enforcing the rules, to prevent the contravention or noncompliance.

WORKS IN WHICH LEAD OR ARSENIC IS USED IN THE TINNING AND ENAMELING OF METAL HOLLOW WARE AND COOKING UTENSILS.

(Form 385- March, 1906.)

Duties of occupiers.

They shall provide washing conveniences with a sufficient supply of hot and cold water, soap, nailbrushes, and towels, and take measures to secure that every worker wash face and hands before meals and before leaving the works.

They shall see that no food is eaten in any room where the process of tinning or enameling is carried on.

Duties of persons employed.

Every worker shall wash face and hands before meals and before leaving the works.

No worker shall eat food in any room where the process of tinning or enameling is carried on.

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

NOTE.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so or acts in contravention of them, is liable to a penalty; and in such case the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing, and to the best of his power, enforcing the rules, to prevent the contravention or noncompliance.

Processes in the Manufacture of Paints and Colors, and in the Extraction of Arsenic.

(Form 249 June, 1904.)

Duties of occupiers.

1. They shall provide washing conveniences, with a sufficient supply of hot and cold water, soap, nailbrushes, and towels, and take measures to secure that every worker wash face and hands before meals, and before leaving the works; and, in addition to the above, sufficient bath accommodation for the use of all persons employed in the manufacture of milan red, vermilionette, or persian red.

2. They shall provide suitable respirators and overall suits, kept in a cleanly state, for all workers engaged in any department where dry white lead or arsenic is used in either the manufacture or paint mixing, and overall suits for those engaged in grinding in water or oil, and for all workers in milan red, vermilionette, or persian red, wherever dust is generated.

3. They shall provide a sufficient supply of approved sanitary drink, which shall be accessible to the workers at all times, and shall cause such approved sanitary drink to be taken daily by workers in any department where white lead or arsenic is used in the manufacture, and shall provide a supply of aperient medicine, which shall be given to the workers, when required, free of charge.

4. No food shall be eaten in any part of the works where white lead or arsenic is used in the manufacture.

Duties of persons employed.

5. Every person to whom is supplied a respirator or overall suit shall wear the same when at the special work for which such are provided.

6. Every person shall carefully clean and wash hands and face before meals and before leaving the works.

7. No food shall be eaten in any part of the works in which white lead or arsenic is used in the manufacture.

8. No person shall smoke or use tobacco in any part of the works in which white lead or arsenic is used in the manufacture

Arthur Whitelegge,
H. M. Chief Inspector of Factories.

Note.—These rules must be kept posted up in conspicuous places in the works to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so or acts in contravention of them, is liable to a penalty, and in such case the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing and, to the best of his power, enforcing the rules, to prevent the contravention or noncompliance

Processes in the Mixing and Casting of Brass, Gun Metal, Bell Metal, White Metal, Delta Metal, Phosphor Bronze, and Manilla Mixture.

(Form 271—February, 1904)

Duties of occupiers.

1. They shall provide adequate means for facilitating, as far as possible, the emission or escape from the shop of any noxious fumes or dust arising from the above-named processes. Such means shall include the provision of traps or of louver gratings in the roof or ceiling of any shop in which such processes, or either of them, is or are carried on; or in case of a mixing or casting shop which is situated under any other shop, there shall be provided an adequate flue or shaft (other than any flue or shaft in connection with a furnace or fireplace) to carry any fumes from the mixing or casting shop, by or through any such shop that may be situated above it.

2 They shall cause all such mixing or casting shops, whether defined as factories or as workshops under the Factory and Workshop Act, 1878, to be cleaned down and limewashed once at least within every twelve months, or once within every six months if so required by notice in writing from H. M. inspector of factories and workshops, dating from the time when these were last thus cleaned down and limewashed; and they shall record the dates of such cleaning down and limewashing in a prescribed form of register.

3. They shall provide a sufficient supply of metal basins, water, and soap, for the use of all persons employed in such mixing or casting shops.

4. They shall not employ, or allow within their factory or workshop the employment of, any woman or female young person, in any process whatever, in any such mixing or casting shop, or in any portion thereof which is not entirely separated by a partition extending from the floor to the ceiling.

Duties of persons employed.

5. They shall not partake of, or cook any food in any such mixing or casting shop, within a period of at least ten minutes after the completion of the last pouring of metal in that shop.

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

July 10, 1896.

Women and young persons under 18 years of age must not be allowed to take a meal in any casting shop or to remain there during the time stated on the notice affixed in the works as being allowed for meals.

These rules must be kept posted up in conspicuous places in the works to which they apply, where they may be conveniently read by the persons employed.

Any person who is bound to observe these rules and fails to do so or acts in contravention of them, is liable to a penalty; and in such case the occupier also is liable to a penalty unless he proves that he has taken all reasonable means, by publishing and, to the best of his power, enforcing the rules, to prevent the contravention or noncompliance.

CHEMICAL WORKS.

(Form 258—Reprinted December, 1901.)

1. In future every uncovered pot, pan, or other structure containing liquid of a dangerous character, shall be so constructed as to be at least 3 feet in height above the ground or platform. Those already in existence which are less than 3 feet in height, or in cases where it is proved to the satisfaction of an inspector that a height of 3 feet is impracticable, shall be securely fenced.

2. There shall be a clear space around such pots, pans, or other structures, or where any junction exists a barrier shall be so placed as to prevent passage.

3. Caustic pots shall be of such construction that there shall be no footing on the top or sides of the brickwork, and dome-shaped lids shall be used where possible.

4. No unfenced planks or gangways shall be placed across open pots, pans, or other structures containing liquid of a dangerous character. This rule shall not apply to black ash vats where the vats themselves are otherwise securely fastened.

5. Suitable respirators shall be provided for the use of the workers in places where poisonous gases or injurious dust may be inhaled.

6. The lighting of all dangerous places shall be made thoroughly efficient.

7. Every place where caustic soda or caustic potash is manufactured shall be supplied with syringes or wash bottles, which shall be inclosed in covered boxes fixed in convenient places, in the proportion of one to every four caustic pots. They shall be of suitable form and size, and be kept full of clean water. Similar appliances shall be provided wherever, in the opinion of an inspector, they may be desirable.

8. Overalls, kept in a cleanly state, shall be provided for all workers in any room where chlorate of potash or other chlorate is ground. In every such room a bath shall be kept ready for immediate use.

In every chlorate mill, tallow or other suitable lubricant shall be used instead of oil.

9. Respirators charged with moist oxide of iron or other suitable substance, shall be kept in accessible places ready for use in cases of emergency arising from the sulphuretted hydrogen or other poisonous gases.

10. In salt cake departments suitable measures shall be adopted by maintaining a proper draft and by other means to obviate the escape of low-level gases.

11. Weldon bleaching powder chambers, after the free gas has, as far as may be practicable, been drawn off or absorbed by fresh lime, shall, before being opened, be tested by the standard recognized under the Alkali Act. Such tests shall be duly entered in a register kept for the purpose.

All chambers shall be ventilated as far as possible, when packing is being carried on, by means of open doors on opposite sides and openings in the roof so as to allow of a free current of air.

12. In cases where the cooperation of the workers is required for carrying out the foregoing rules, and where such cooperation is not given, the workers shall be held liable in accordance with the Factory and Workshop Act, 1891, section 9, which runs as follows: "If any person who is bound to observe any special rules, established for any factory or workshop under this Act, acts in contravention of, or fails to comply with, any such special rule, he shall be liable on summary conviction to a fine not exceeding two pounds [$9.73]."

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

AMENDED SPECIAL RULES FOR CHEMICAL WORKS IN WHICH IS CARRIED ON THE MANUFACTURE OF BICHROMATE OR CHROMATE OF POTASSIUM OR SODIUM.

(Form 260—January, 1906.)

In these rules "persons employed in a chromo process" means a person who is employed in any work involving contact with chromate or bichromate of potassium or sodium, or involving exposure to dust or fumes arising from the manufacture thereof.

Any approval given by the chief inspector in pursuance of Rule 10 shall be given in writing, and may at any time be revoked by notice in writing signed by him.

Duties of occupiers.

1. No uncovered pot, pan, or other structure containing liquid of a dangerous character shall be so constructed as to be less than 3 feet in height above the adjoining ground or platform.

This rule shall not apply to any pot, pan, or other structure constructed before January 1, 1899, or in which a height of 3 feet is impracticable by reason of the nature of the work to be carried on, provided in either case that the structure is securely fenced.

2. There shall be a clear space round all pots, pans, or other structures containing liquid of a dangerous character, except where any junction exists, in which case a barrier shall be so placed as to prevent passage

3. No unfenced plank or gangway shall be placed across any pot, pan, or other structure containing liquid of a dangerous character.

4. The lighting of all dangerous places shall be made thoroughly efficient.

5. The grinding, separating, and mixing of the raw materials (including chrome ironstone, lime, and sodium and potassium carbonate) shall not be done without such appliances as will prevent, as far as possible, the entrance of dust into the workrooms

6. "Batches," when withdrawn from the furnaces, shall either be placed in the keaves or vats while still warm, or be allowed to cool in barrows, or other receptacles.

7. Evaporating vessels shall be covered in, and shall be provided with ventilating shafts to carry the steam into the outside air

8. Packing or crushing of bichromate of potassium or sodium shall not be done except under conditions which secure either the entire absence of dust or its effectual removal by means of a fan.

9. No child or young person shall be employed in a chrome process.

10. The occupier shall, subject to the approval of the chief inspector, appoint a duly qualified medical practitioner (in these rules referred to as the appointed surgeon), who shall examine all persons employed in chrome processes at least once in every month, and shall undertake any necessary medical treatment of disease contracted in consequence of such employment, and shall, after the 30th day of April, 1900, have power to suspend any such person from work in any place or process.

(*b*) No person after such suspension shall be employed in any chrome process without the written sanction of the appointed surgeon.

(*c*) A register shall be kept in a form approved by the chief inspector, and shall contain a list of all persons employed in any chrome process. The appointed surgeon shall enter in the register the dates and results of his examinations of the persons employed and particulars of any treatment prescribed by him. The register shall be produced at any time when required by H. M. inspectors of factories or by the appointed surgeon.

11. Requisites (approved by the appointed surgeon) for treating slight wounds and ulcers shall be kept at hand and be placed in charge of a responsible person.

12. The occupier shall provide sufficient and suitable overall suits for the use of all persons engaged in the processes of grinding the raw materials; and sufficient and suitable overall suits or other adequate means of protection approved in writing by the appointed surgeon, for the use of all persons engaged in the crystal department or in packing.

Respirators approved by the appointed surgeon shall be provided for the use of all persons employed in packing or crushing bichromate of sodium or potassium.

At the end of every day's work they shall be collected and kept in proper custody in a suitable place set apart for the purpose.

The overalls and respirators shall be thoroughly washed or renewed every week.

13. The occupier shall provide and maintain a cloakroom in which workers can deposit clothing put off during working hours.

14. The occupier shall provide and maintain a lavatory for the use of the persons employed in chrome processes; with soap, nailbrushes, and towels, and a constant supply of hot and cold water laid onto each basin There shall be at least one lavatory basin for every five persons employed in the crystal department and in packing. Each such basin shall be fitted with a waste pipe, or shall be placed in a trough fitted with a waste pipe.

15. The occupier shall provide and maintain sufficient baths and dressing rooms for all persons employed in chrome processes, with hot and cold water laid on, and a sufficient supply of soap and towels, and shall cause each person employed in the crystal department and in packing to take a bath once a week at the factory.

A bath register shall be kept containing a list of all persons employed in the crystal department and in packing, and an entry of the date when each person takes a bath.

The bath register shall be produced at any time when required by H. M. inspectors of factories

16. The floors, stairs, and landings, shall be cleaned daily.

Duties of persons employed.

17. No person shall deposit a "batch" when withdrawn from the furnace upon the floor nor transfer it to the keaves or vats otherwise than as prescribed in Rule 6.

18. No person shall pack or crush bichromate of potassium or sodium otherwise than as prescribed in Rule 8.

19. (*a*) Every person employed in a chrome process shall present himself at the appointed times for examination by the appointed surgeon as provided in Rule 10.

(*b*) After the 30th day of April, 1900, no person suspended by the appointed surgeon shall work in a chrome process without his written sanction

20. Every person engaged in the processes of grinding the raw materials shall wear an overall suit, and every person engaged in the crystal department or in packing shall wear an overall suit or other adequate means of protection approved by the appointed surgeon.

Every person employed in packing or crushing bichromate of sodium or potassium shall in addition wear a respirator while so occupied.

21. Every person employed in the processes named in Rule 20 shall before leaving the premises deposit the overalls and respirators in the place appointed by the occupier for the purpose, and shall thoroughly wash face and hands in the lavatory.

22. Every person employed in the crystal department and in packing shall take a bath at the factory at least once a week; and, having done so, he shall at once sign his name in the bath register, with the date.

23. The foreman shall report to the manager any instance coming under his notice of a workman neglecting to observe these rules.

ARTHUR WHITELEGGE,
Chief Inspector of Factories.
M. W. RIDLEY,
One of Her Majesty's Principal Secretaries of State.

FEBRUARY, 1900.

NOTE.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so or acts in contravention of them, is liable to penalty; and in such cases the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing and, to the best of his power, enforcing the rules, to prevent the contravention or noncompliance.

MANUFACTURE OF EXPLOSIVES IN WHICH DI-NITRO-BENZOLE IS USED.

(Form 257—December, 1904.)

1. No person to be employed without a medical certificate, stating that he or she is physically fit for such employment.

2. An examination of the workers at their work to be made at least once a fortnight by a certifying surgeon, who shall have power to order temporary suspension or total change of work for any person showing symptoms of suffering from the poison, or if after a fair trial he is of opinion that any person is by constitution unfit, he shall direct that such person shall cease to be employed.

3. A supply of fresh milk, and of any drug that the medical officer may consider desirable, shall be kept where the workers in his opinion may require it.

4. No meals to be taken in the work rooms.

5. There shall be provided separate lavatories for men and women, with a good supply of hot water, soap, nailbrushes, and towels, and whenever the skin has come in contact with di-nitro-benzole, the part shall be immediately washed.

6. Overall suits and head coverings shall be supplied to all workers in shops where di-nitro-benzole is used, these suits to be taken off or well brushed before meals and before leaving the works, and to be washed at least once a week.

7. Suitable respirators (capable of being washed), folds of linen, or woolen material of open texture, or other suitable material, shall be supplied to those workers liable to inhale dust, and the wearing of such respirators shall be urged where the workers derive benefit from their use.

8. Where di-nitro-benzole has to be handled, the hands shall always be protected from direct contact with it, either by the use of india-rubber gloves (kept perfectly clean, especially in the inner side), or by means of rags which shall be destroyed immediately after use.

9. Where di-nitro-benzole is broken by hand, the instrument used shall be a wooden bar, spade, or tool with a handle long enough to prevent the worker's face from coming into contact with the material.

10. In all rooms or sheds in which the process, either of purifying, grinding, mixing materials of which di-nitro-benzole forms a part, is carried on, efficient "cowls," ventilating shafts, and mechanical ventilating fans shall be provided to carry off the dust or fumes generated.

11. Drying stoves shall be efficiently ventilated, and, when possible, be charged and drawn at fixed times, and a free current of air shall be admitted for some time prior to the workers entering to draw either a part or the whole of the contents.

12 In the process of filling cartridges, the material shall not be touched by hand, but suitable scoops shall be used, and where patent ventilated cartridge filling machines are not used, there shall be efficient mechanical ventilation arranged in such a manner that the suction shall draw the fumes or dust away from and not across or over the faces of the workers.

13. A register, in a prescribed form, shall be kept, and it shall be the duty of a responsible person named by the firm to enter, at least once a week, a statement that he has personally satisfied himself that each and all of the special rules have been observed, or if not, the reason for such nonobservance. The surgeon to enter in this register the dates of his visits, the results of such visits, and any requirement made by him.

14. The "dipping" rooms to be efficiently ventilated.

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

NOTE.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so or acts in contravention of them, is liable to a penalty; and in such case the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing and, to the best of his power, enforcing the rules, to prevent the contravention or noncompliance.

VULCANIZING OF INDIA RUBBER BY MEANS OF BISULPHIDE OF CARBON.

(Form 274 – October, 1906.)

I.—Duties of employers.

1. No child or young person shall be employed in any room in which bisulphide of carbon is used.

2. After May 1, 1898, no person shall be employed for more than five hours in any day in a room in which bisulphide of carbon is used, nor for more than two and a half hours at a time without an interval of at least an hour.

3. In vulcanizing waterproof cloth by means of bisulphide of carbon—

(*a*) The trough containing the bisulphide of carbon shall be self-feeding and covered over;

(*b*) The cloth shall be conveyed to and from the drying chamber by means of an automatic machine;

(*c*) No person shall be allowed to enter the drying chamber in the ordinary course of work;

(*d*) The machine shall be covered over and the fumes drawn away from the workers by means of a downward suction fan maintained in constant efficiency.

4. Dipping shall not be done except in boxes so arranged that a suction fan shall draw the fumes away from the workers.

5. No food shall be allowed to be eaten in any room in which bisulphide of carbon is used.

6. A suitable place for meals shall be provided.

7. All persons employed in rooms in which bisulphide of carbon is used shall be examined once a month by the certifying surgeon for the district, who shall, after May 1, 1898, have power to order temporary or total suspension from work.

8. No person shall be employed in any room in which bisulphide of carbon is used contrary to the direction of the certifying surgeon given as above.

9. A register in the form which has been prescribed by the secretary of state for use in india-rubber works shall be kept, and in it the certifying surgeon will enter the dates and result of his visits, with the number of persons examined, and particulars of any directions given by him. This register shall contain a list of all persons employed in rooms in which bisulphide of carbon is used, and shall be produced at any time when required by H. M. inspector of factories or by the certifying surgeon.

II.—Duties of persons employed.

10. No person shall enter the drying room in the ordinary course of work, or perform dipping except in boxes provided with a suction fan carrying the fumes away from the workers.

11. No person shall take any food in any room in which bisulphide of carbon is used.

12. After May 1, 1898, no person shall, contrary to the direction of the certifying surgeon, given in pursuance of Rule 7, work in any room in which bisulphide of carbon is used.

13. All persons employed in rooms in which bisulphide of carbon is used shall present themselves for periodic examination by the certifying surgeon, as provided in Rule 7.

14. It shall be the duty of all persons employed to report immediately to the employer or foreman any defect which they may discover in the working of the fan or in any appliance required by these rules.

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

NOTE.—These rules are required to be posted up in conspicuous places in the factory or workshop to which they apply, where they may be conveniently read by the persons employed. Any person who willfully injures or defaces them is liable to a penalty not exceeding five pounds [$24.33]. Occupiers of factories and workshops, and persons employed therein, who are bound to observe these rules, are liable to penalties in case of noncompliance. (Factory and Workshop Act, 1891, section 9, and Factory and Workshop Act, 1901, sections 85 and 86.)

LUCIFER MATCH FACTORIES IN WHICH WHITE OR YELLOW PHOSPHORUS IS USED.

(Form 384—January, 1904.)

In these rules "phosphorous process" means mixing, dipping, drying, boxing, and any other work or process in which white or yellow phosphorus is used; and "person employed in a phosphorous process" means any person who is employed in any room or part of the factory where such a process is carried on.

"Double dipped matches" means wood splints, both ends of which have been dipped in the igniting composition.

"Certifying surgeon" means a surgeon appointed under the Factory and Workshop Acts.

Any approval or decision given by the chief inspector of factories in pursuance of these rules shall be given in writing, and may at any time be revoked by notice in writing signed by him.

Rules 5 (*a*), 5 (*b*), 6, 8, and 19, so far as they affect the employment of adult workers, shall not come into force until the 1st day of October, 1900.

Duties of employers.

1. No part of a lucifer match factory shall be constructed, structurally altered, or newly used, for the carrying on of any phosphorous process, unless the plans have previously been submitted in duplicate to the chief inspector of factories, and unless he shall have approved the plans in writing, or shall not within six weeks from the submission of the plans have expressed his disapproval in writing of the same.

2. Every room in which mixing, dipping, drying, or boxing is carried on shall be efficiently ventilated, by means of sufficient openings to the outer air, and also by means of fans, unless the use of fans is dispensed with by order in writing of the chief inspector, shall contain at least 400 cubic feet of air space for each person employed therein; and in computing this air space no height above 14 feet shall be taken into account; shall be efficiently lighted, shall have a smooth and impervious floor. A floor laid with flagstones or hard bricks in good repair shall be deemed to constitute a smooth and impervious floor.

3. (*a*) The processes of mixing, dipping, and drying shall each be done in a separate and distinct room. The process of boxing double-dipped matches or matches not thoroughly dry shall also be done in a separate and distinct room. These rooms shall not communicate with any other part of the factory unless there shall be a ventilated space intervening, nor shall they communicate with one another, except by means of doorways with closely fitting doors, which doors shall be kept shut except when some person is passing through.

(*b*) Mixing shall not be done except in an apparatus so closed, or so arranged, and ventilated by means of a fan, as to prevent the entrance of fumes into the air of the mixing room.

(*c*) Dipping shall not be done except on a slab provided with an efficient exhaust fan, and with an air inlet between the dipper and the slab, or with a hood, so arranged as to draw the fumes away from the dipper, and to prevent them from entering the air of the dipping room.

(*d*) Matches that have been dipped and can not at once be removed to the drying room shall immediately be placed under a hood provided with an efficient exhaust fan, so arranged as to prevent the fumes from entering the air of the room.

(*e*) Matches shall not be taken to a boxing room not arranged in compliance with subsection (*f*) of this rule until they are thoroughly dry, and matches shall not be taken to a boxing room that is so arranged until they are dried so far as they can be before cutting down and boxing.

(*f*) Cutting down of double-dipped matches and boxing of matches not thoroughly dry shall not be done except at benches or tables provided with an efficient exhaust fan, so arranged as to draw the fumes away from the worker and prevent them from entering the air of the boxing room.

Provided that the foregoing rule shall not prevent the employment of any mechanical arrangement for carrying on any of the above-mentioned processes if the same be approved by the chief inspector as obviating the use of hand labor, and if it be used subject to the conditions (if any) specified in such approval.

Provided further that if the chief inspector shall, on consideration of the special circumstances of any particular case, so approve in writing, all or any of the provisions of the foregoing rule may be suspended for the time named in such approval in writing.

4. Vessels containing phosphorous paste shall, when not actually in use, be kept constantly covered, and closely fitting covers or damp flannels shall be provided for the purpose.

5. (*a*) For the purposes of these rules the occupier shall appoint, subject to the approval of the chief inspector, a duly qualified and registered dentist, herein termed the appointed dentist.

It shall be the duty of the appointed dentist to suspend from employment in any phosphorous process any person whom he finds to incur danger of phosphorous necrosis by reason of defective conditions of teeth or exposure of the jaw.

(*b*) No person shall be newly employed in a dipping room for more than twenty-eight days, whether such days are consecutive or not, without being examined by the appointed dentist.

(*c*) Every person employed in a phosphorous process, except persons employed only as boxers of wax vestas or other thoroughly dry matches, shall be examined by the appointed dentist at least once in every three months.

(*d*) Any person employed in the factory complaining of toothache, or a pain or swelling of the jaw, shall at once be examined by the appointed dentist.

(*e*) When the appointed dentist has reason to believe that any person employed in the factory is suffering from inflammation or necrosis of the jaw, or is in such a state of health as to incur danger of phosphorous necrosis, he shall at once direct the attention of the certifying surgeon and occupier to the case. Thereupon such person shall at once be examined by the certifying surgeon.

6. No person shall be employed in a phosphorous process after suspension by the appointed dentist; or after the extraction of a tooth; or after any operation involving exposure of the jaw bone; or after inflammation or necrosis of the jaw; or after examination by the appointed dentist in pursuance of Rule 5 (*d*); or after reference to the certifying surgeon in pursuance of Rule 5 (*e*), unless a certificate of fitness has been given, after examination, by signed entry in the health register, by the appointed dentist or by the certifying surgeon in cases referred to him under Rule 5 (*e*).

7. A health register, in a form approved by the chief inspector of factories, shall be kept by the occupier, and shall contain a complete list of all persons employed in each phosphorous process, specifying with regard to each such person the full name, address, age when first employed, and date of first employment.

The certifying surgeon will enter in the health register the dates and results of his examinations of persons employed in phosphorous processes, and particulars of any directions given by him.

The appointed dentist will enter in the health register the dates and results of his examinations of the teeth of persons employed in phosphorous processes, and particulars of any directions given by him, and a note of any case referred by him to the certifying surgeon.

The health register shall be produced at any time when required by H. M. inspectors of factories, or by the certifying surgeon, or by the appointed dentist.

8. Except persons whose names are on the health register mentioned in Rule 7, and in respect of whom certificates of fitness shall have been granted, no person shall be newly employed in any phosphorous process for more than 28 days, whether such days are consecutive or not, without a certificate of fitness, granted after examination by the certifying surgeon, by signed entry in the health register.

This rule shall not apply to persons employed only as boxers of wax vestas or other thoroughly dry matches.

9. The occupier shall provide and maintain sufficient and suitable overalls for all persons employed in phosphorous processes, except for persons employed only as boxers of wax vestas or other thoroughly dry matches, and shall cause them to be worn as directed in Rule 20.

At the end of every day's work they shall be collected and kept in proper custody in a suitable place set apart for the purpose.

They shall be thoroughly washed every week, and suitable arrangements for this purpose shall be made by the occupier.

10. The occupier shall provide and maintain—

(*a*) A dining room, and

(*b*) A cloak room in which workers can deposit clothing put off during working hours.

11. No person shall be allowed to prepare or partake of any food or drink in any room in which a phosphorous process is carried on, nor to bring any food or drink into such room.

12. The occupier shall provide and maintain for the use of the workers a lavatory, with soap, nailbrushes, towels, and at least one lavatory basin for every five persons employed in any phosphorous process.

Each such basin shall be fitted with a waste pipe, or the basins shall be placed on a trough fitted with a waste pipe. There shall be a constant supply of hot and cold water laid on to each basin.

Or, in the place of basins, the occupier shall provide and maintain enamel or galvanized iron troughs, in good repair, of a total length of 2 feet for every five persons employed, fitted with waste pipes and without plugs, with a sufficient supply of warm water constantly available.

The lavatory shall be kept thoroughly cleansed, and shall be supplied with a sufficient quantity of clean towels twice in each day.

There shall, in addition, be means of washing in close proximity to the workers in any department, if so required in writing by the inspector in charge of the district.

13. The occupier shall provide for the use of every person employed in a phosphorous process an antiseptic mouth wash approved by the appointed dentist, and a sufficient supply of glasses or cups.

14. The floor of each room in which a phosphorous process is carried on shall be cleared of waste at least once a day, and washed at least once a week. of

15 A printed copy of these rules shall be given to each person on ente notice in employment in a phosphorous process.

workers,

Duties of persons employed.

16. No person shall work in a mixing, dipping, drying, or boxing room under otl. conditions than those prescribed in Rule 3

17. No person shall allow a vessel containing phosphorous paste to remain uncovered except when actually in use.

18. All persons employed in a phosphorous process shall present themselves at the appointed times for examination by the certifying surgeon and appointed dentist, as provided in Rules 5, 6 and 8.

19 Every person employed in a phosphorous process and suffering from toothache or swelling of the jaw; or having had a tooth extracted or having undergone any other operation involving exposure of the jaw, shall at once inform the occupier, and shall not resume employment in a phosphorous process without a certificate of fitness from the appointed dentist, as provided in Rule 6

No person, after suspension by the appointed dentist, or after reference to the certifying surgeon, shall resume employment in a phosphorous process without a certificate of fitness, as provided in Rule 6.

20 Every person employed in a phosphorous process for whom the occupier is required by Rule 9 to provide overalls shall wear while at work the overalls so provided.

21. Every person employed in a phosphorous process shall, before partaking of meals or leaving the premises, deposit the overalls in the place appointed by the occupier for the purpose, and shall thoroughly wash in the lavatory.

22. No person shall prepare or partake of food or drink in any room in which a phosphorous process is carried on, or bring any food or drink into such room.

23. No person shall in any way interfere, without the knowledge and concurrence of the occupier or manager, with the means and appliances provided for the removal of dust and fumes

24. Foremen and forewomen shall report to the manager any instance coming under their notice of a worker neglecting to observe these rules.

ARTHUR WHITELEGGE,
Chief Inspector of Factories.

APRIL, 1900.

NOTE.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so or acts in contravention of them is liable to a penalty; and in such cases the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing and, to the best of his power, enforcing the rules to prevent the contravention or noncompliance.

FELT HATS.

Whereas the manufacture of felt hats with the aid of inflammable solvent has been certified in pursuance of section 79 of the Factory and Workshop Act, 1901, to be dangerous, I hereby, in pursuance of the power conferred on me by that act, make the following regulations, and direct that they shall apply to all factories and workshops in which any inflammable solvent is used in the manufacture of felt hats:

1. Every proofing room and every stove or drying room in which an inflammable solvent is evaporated shall be thoroughly ventilated to the satisfaction of the inspector for the district, so as to carry off as far as possible the inflammable vapor

2. The number of wet spirit-proofed hat bodies allowed to be in a proofing room at any one time shall not exceed the proportion of one hat for each 15 cubic feet of air space; and in no stove, whilst the first drying of any spirit-proofed hats is being carried on, shall the number of hat bodies of any kind exceed a proportion of one hat for each 12 cubic feet of air space.

A notice stating the dimensions of each such room or stove in cubic feet and the number of spirit-proofed hats allowed to be therein at any one time shall be kept constantly affixed in a conspicuous position.

3. Spirit-proofed hats shall be opened out singly and exposed for one hour before being placed in the stove. This requirement shall not apply in the case of a stove which contains no fire or artificial light capable of igniting inflammable vapor, and which is so constructed and arranged as, in the opinion of the inspector for the district,
(d) [illegible] no risk of such ignition from external fire or light.
swelling of ve rules, in so far as they affect drying stoves, shall not apply to the proc-
(e) Whe hat bodies where the solvent is recovered in a closed oven or chamber
the facto safe and suitable apparatus for the condensation of the solvent
health person shall smoke in any room or place in which inflammable solvent is
of th l to the air.
These regulations shall come into force on the 1st day of October, 1902.

A. Akers-Douglas,
One of His Majesty's Principal Secretaries of State.

Whitehall, *12th August, 1902.*

Special Rules for the Handling of Dry and Drysalted Hides and Skins Imported from China or from the West Coast of India.

(Form 486—February, 1906.)

Duties of occupier.

1. Proper provision to the reasonable satisfaction of the inspector in charge of the district shall be made for the keeping of the workmen's food and clothing outside any room or shed in which any of the above-described hides or skins are unpacked, sorted, packed, or stored.

2. Proper and sufficient appliances for washing, comprising soap, basins, with water laid on, nailbrushes and towels, shall be provided and maintained for the use of the workmen, to the reasonable satisfaction of the inspector in charge of the district.

3. Sticking plaster, and other requisites for treating scratches and slight wounds, shall be kept at hand, available for the use of the persons employed.

4. A copy of the appended notes shall be kept affixed with the rules.

Duties of persons employed.

5. No workman shall keep any food, or any articles of clothing other than those he is wearing, in any room or shed in which any of the above-described hides or skins are handled.

He shall not take any food in any such room or shed.

6. Every workman having any open cut or scratch or raw surface, however trifling, upon his face, head, neck, arm, or hand shall immediately report the fact to the foreman, and shall not work on the premises until the wound is healed or is completely covered by a proper dressing after being thoroughly washed.

Arthur Whitelegge,
Chief Inspector of Factories.
Chas. T. Ritchie,
One of His Majesty's Principal Secretaries of State.

August, 1901.

Note 1.—These rules must be kept posted up in conspicuous places in the factory to which they apply, where they may be conveniently read by the persons employed. Any person who is bound to observe these rules and fails to do so, or acts in contravention of them, is liable to a penalty; and in such cases the occupier also is liable to a penalty unless he proves that he has taken all reasonable means by publishing and, to the best of his power, enforcing the rules, to prevent the contravention or noncompliance.

Note 2.—The danger against which these rules are directed is that of anthrax—a fatal disease affecting certain animals, which may be conveyed from them to man by the handling of hides of animals which have died of the disease. The germs of the disease (anthrax spores) are found in the dust and in the substance of the hide, and may remain active for years. In this country anthrax is rare, and precautions are taken to prevent infected hides from coming into the market, consequently there is little danger in handling the hides of animals slaughtered in the United Kingdom; but in Russia, China, and the East Indies, and in many other parts of the world, the disease is common, and infected hides (which do not differ from others in appearance) are often shipped to British ports. Hence in handling foreign dry hides the above rules should be carefully observed. Wet salted hides are free from dust, and less risk is incurred in handling them.

The disease is communicated to man sometimes by breathing or swallowing the dust from an infected hide, but much more usually by the poison lodging in some point where the skin is broken— such as a fresh scratch or cut or a scratched pimple, or even chapped hands. This happens most readily on the uncovered parts of the body, the hand, arm, face, and most frequently of all on the neck—owing either to an infected hide rubbing against the bare skin, or to dust from such a hide alighting on the raw surface. But a raw surface covered by clothing is not free from risk, for dust lodging upon the clothes may sooner or later work its way to the skin beneath. Infection may also be brought about by rubbing or scratching a pimple with hand or nail carrying the anthrax poison.

The first symptom of anthrax is usually a small inflamed swelling like a pimple or boil, often quite painless, which extends and in a few days becomes black at the center and surrounded by other "pimples." The poison is now liable to be absorbed into the system and will cause risk to life, which can be avoided only by prompt and effective medical treatment in the early stage while the poison is still confined to the pimple. Hence it is of the utmost importance that a doctor should *at once* be consulted if there is any suspicion of infection.

NOTE 3.—Suitable overalls, protecting the neck and arms, as well as ordinary clothing, add materially to the safety of the workmen, and should be provided and worn, where practicable, if dangerous hides are handled. They should be discarded on cessation of work. Similarly for the protection of the hands, gloves should be provided and worn where the character of the work permits.

WOOL AND HAIR SORTING.

Whereas the processes of sorting, willying, washing, and combing and carding wool, goat-hair, and camel-hair and processes incidental thereto have been certified, in pursuance of section 79 of the Factory and Workshop Act, 1901, to be dangerous:

I hereby in pursuance of the powers conferred on me by that act make the following regulations, and direct that they shall apply to all factories and workshops in which the said processes are carried on, and in which the materials named in the schedules are used

It shall be the duty of the occupier to comply with Regulations 1 to 16. It shall be the duty of all persons employed to comply with Regulations 17 to 23.

These regulations shall come into force on the 1st of January, 1906, except that Regulations 2 and 8 shall not come into force until the 1st of April, 1906.

Definition.

For the purpose of Regulations 2, 3, and 18, opening of wool or hair means the opening of the fleece, including the untying or cutting of the knots, or, if the material is not in the fleece, the opening out for looking over or classing purposes.

Duties of occupiers.

1. No bale of wool or hair of the kinds named in the schedules shall be opened for the purpose of being sorted or manufactured, except by men skilled in judging the condition of the material.

No bale of wool or hair of the kinds named in Schedule A shall be opened except after thorough steeping in water.

2. No wool or hair of the kinds named in Schedule B shall be opened except (*a*) after steeping in water, or (*b*) over an efficient opening screen, with mechanical exhaust draft, in a room set apart for the purpose, in which no other work than opening is carried on.

For the purpose of this regulation, no opening screen shall be deemed to be efficient unless it complies with the following conditions:

(*a*) The area of the screen shall, in the case of existing screens, be not less than 11 square feet, and in the case of screens hereafter erected be not less than 12 square feet, nor shall its length or breadth be less than 3½ feet.

(*b*) At no point of the screen within 18 inches from the center shall the velocity of the exhaust draft be less than 100 linear feet per minute.

3. All damaged wool or hair or fallen fleeces or skin wool or hair, if of the kinds named in the schedules, shall, when opened be damped with a disinfectant and washed without being willowed.

4. No wool or hair of the kinds named in schedules B or C shall be sorted except over an efficient sorting board, with mechanical exhaust draft, and in a room set apart for the purpose, in which no work is carried on other than sorting and the packing of the wool or hair sorted therein.

No wool or hair of the kinds numbered (1) and (2) in Schedule A shall be sorted except in the damp state and after being washed

No damaged wool or hair of the kinds named in the schedules shall be sorted except after being washed

For the purpose of this regulation, no sorting board shall be deemed to be efficient unless it complies with the following conditions:

The sorting board shall comprise a screen of open wirework, and beneath it at all parts a clear space not less than 3 inches in depth. Below the center of the screen there shall be a funnel, measuring not less than 10 inches across the top, leading to an extraction shaft, and the arrangements shall be such that all dust falling through the screen and not carried away by the exhaust can be swept directly into the funnel. The draft shall be maintained in constant efficiency whilst the sorters are at work, and shall be such that not less than 75 cubic feet of air per minute are drawn by the fan from beneath each sorting board

5 No wool or hair of the kinds named in the schedules shall be willowed except in an efficient willowing machine, in a room set apart for the purpose, in which no work other than willowing is carried on.

For the purpose of this regulation, no willowing machine shall be deemed to be efficient unless it is provided with mechanical exhaust draft so arranged as to draw the dust away from the workmen and prevent it from entering the air of the room.

6. No bale of wool or hair shall be stored in a sorting room, nor any wool or hair except in a space effectually screened off from the sorting room.

No wool or hair shall be stored in a willowing room

7. In each sorting room, and exclusive of any portion screened off, there shall be allowed an air space of at least 1,000 cubic feet for each person employed therein.

8. In each room in which sorting, willowing, or combing is carried on, suitable inlets from the open air, or other suitable source, shall be provided and arranged in such a way that no person employed shall be exposed to a direct draft from any air inlet or to any draft at a temperature of less than 50° F.

The temperature of the room shall not, during working hours, fall below 50° F.

9. All bags in which wool or hair of the kinds named in the schedules has been imported shall be picked clean, and not brushed.

10. All pieces of skin, scab, and clippings or shearings shall be removed daily from the sorting room, and shall be disinfected or destroyed.

11. The dust carried by the exhaust draft from opening screens, sorting boards, willowing or other dust extracting machines and shafts shall be discharged into properly constructed receptacles, and not into the open air

Each extracting shaft and the space beneath the sorting boards and opening screens shall be cleaned out at least once in every week.

The dust collected as above, together with the sweepings from the opening, sorting, and willowing rooms, shall be removed at least twice a week and burned.

The occupier shall provide and maintain suitable overalls and respirators, to be worn by the persons engaged in collecting and removing the dust.

Such overalls shall not be taken out of the works or warehouse, either for washing, repairs, or any other purpose, unless they have been steeped overnight in boiling water or a disinfectant.

12. The floor of every room in which opening, sorting, or willowing is carried on shall be thoroughly sprinkled daily with a disinfectant solution after work has ceased for the day, and shall be swept immediately after sprinkling.

13. The walls and ceilings of every room in which opening, sorting, or willowing is carried on shall be limewashed at least once a year, and cleansed at least once within every six months, to date from the time when they were last cleansed.

14. The following requirements shall apply to every room in which unwashed wool or hair of the kinds named in the schedules after being opened for sorting, manufacturing, or washing purposes is handled or stored:

(*a*) Sufficient and suitable washing accommodation shall be provided outside the rooms and maintained for the use of all persons employed in such rooms. The washing conveniences shall comprise soap, nailbrushes, towels, and at least one basin for every five persons employed as above, each basin being fitted with a waste pipe and having a constant supply of water laid on.

(*b*) Suitable places shall be provided outside the rooms in which persons employed in such rooms can deposit food and clothing put off during working hours.

(*c*) No person shall be allowed to prepare or partake of food in any such room. Suitable and sufficient meal room accommodation shall be provided for workers employed in such rooms

(*d*) No person having any open cut or sore shall be employed in any such room. The requirements in paragraph (*c*) shall apply also to every room in which any wool or hair of the kinds named in the schedules is carded or stored.

15. Requisites for treating scratches and slight wounds shall be kept at hand.

16. The occupier shall allow any H. M. inspectors of factories to take at any time, for the purpose of examination, sufficient samples of any wool or hair used on the premises

Duties of persons employed.

17. No bale of wool or hair of the kinds named in the schedules shall be opened otherwise than as permitted by paragraph 1 of Regulation 1, and no bale of wool or hair of the kinds named in Schedule A shall be opened except after thorough steeping in water.

If on opening a bale any damaged wool or hair of the kinds named in the schedules is discovered, the person opening the bale shall immediately report the discovery to the foreman

18. No wool or hair of the kinds named in Schedule B shall be opened otherwise than as permitted by Regulation 2

19. No wool or hair of the kinds named in the schedules shall be sorted otherwise than as permitted by Regulation 1.

20. No wool or hair of the kinds named in the schedules shall be willowed except as permitted by Regulation 5.

21. Every person employed in a room in which unwashed wool or hair of the kinds named in the schedules is stored or handled shall observe the following requirements:

(*a*) He shall wash his hands before partaking of food, or leaving the premises.

(*b*) He shall not deposit in any such room any article of clothing put off during working hours.

He shall wear suitable overalls while at work, and shall remove them before partaking of food or leaving the premises

(*c*) If he has any open cut or sore, he shall report the fact at once to the foreman, and shall not work in such a room.

No person employed in any such room or in any room in which wool or hair of the kinds named in the schedule is either carded or stored shall prepare or partake of any food therein, or bring any food therein.

22. Persons engaged in collecting or removing dust shall wear the overalls as required by Regulation 11

Such overalls shall not be taken out of the works or warehouse either for washing, repairs, or any other purpose, unless they have been steeped overnight in boiling water or a disinfectant.

23 If any fan, or any other appliance for the carrying out of these regulations, is out of order, any workman becoming aware of the defect shall immediately report the fact to the foreman.

H. J GLADSTONE,
One of His Majesty's Principal Secretaries of State.

HOME OFFICE, *Whitehall, 12th December, 1905.*

Schedule A.

(Wool or hair required to be steeped in the bale before being opened)

1. Van mohair.
2. Persian locks.
3. Persian or so-called Persian (including Karadi and Bagdad) if not subjected to the process of sorting or willowing.

Schedule B

(Wool or hair required to be opened either after steeping or over an efficient opening screen.)

Alpaca.
Pelitan.
East Indian cashmere.
Russian camel hair.
Pekin camel hair.
Persian or so-called Persian (including Karadi and Bagdad) if subjected to the process of sorting or willowing.

Schedule C.

(Wool or hair not needing to be opened over an opening screen but required to be orted over a board provided with downward draught.)

All mohair other than van mohair.

Note.—The danger against which these regulations are directed is that of anthrax—a fatal disease affecting certain animals, which may be conveyed from them to man by the handling of wools or hairs from animals which have died of the disease. The germs of the disease (anthrax spores) are found in the dust attaching to the wool, or in the excrement, and in the substance of the pieces of skin, and may remain active or years. In this country and Australia anthrax is rare, consequently there is little danger in handling wools from the sheep of these two countries, but in China, Persia, Turkey, Russia, the East Indies, and in many other parts of the world, the disease is common, and infected fleeces or locks (which may not differ from others in appearance) are often shipped to Great Britain. Hence, in handling foreign dry wools and hair, he above regulations should be carefully observed Greasy wools are comparatively ree from dust and therefore little risk is incurred in handling them. The disease is communicated to man sometimes by breathing or swallowing the dust from these wools or hair, and sometimes by the poison lodging in some point where the skin is broken, such as a fresh scratch or cut, or a scratched pimple, or even chapped hands. This happens more readily on the uncovered parts of the body, the hand, arm, face, and most frequently of all, on the neck, owing either to infected wool rubbing against he bare skin, or to dust from such wool alighting on the raw surface. But a raw urface covered by clothing is not free from risk, for the dust lodging upon the clothes may sooner or later work its way to the skin beneath. Infection may also be brought about by rubbing or scratching a pimple with hand or nail carrying the anthrax poison. Use of the nailbrush, and frequent washing and bathing of the whole body, especially of the arms, neck, and head, will lessen the chance of contracting anthrax.

The first symptom of anthrax is usually a small inflamed swelling like a pimple or boil—often quite painless—which extends, and in a few days becomes black at the center, and surrounded by other "pimples" The poison is now liable to be absorbed nto the system, and will cause risk of life, which can be avoided only by prompt and effective medical treatment in the early stage, while the poison is still confined o the pimple. Hence, it is of the utmost importance that a doctor should be *at once* consulted if there is any suspicion of infection.

Flax and Tow Spinning and Weaving.

Whereas the processes of spinning and weaving flax and tow and the processes ncidental thereto have been certified in pursuance of section 79 of the Factory and Workshop Act, 1901, to be dangerous:

I hereby in pursuance of the powers conferred on me by that act make the following egulations, and direct that they shall apply to all factories in which the processes named above are carried on, and to all workshops in which the processes of roughing, orting, or hand-hackling of flax or tow are carried on.

These regulations shall come into force on the 1st day of February, 1907.

Provided that in the case of all rooms in which roughing or hand-hackling is now carried on, and in which there is respectively (*a*) no system of local mechanical exhaust ventilation, or (*b*) no artificial means of regulating the temperature, Regulaions 2 and 3, respectively, shall not come into force until the 1st day of February, 1908.

Definitions.

In these regulations—

"Degrees" means degrees on the Fahrenheit scale.

"Roughing, sorting, hand-hackling, machine-hackling, carding, and preparing" mean those processes in the manufacture of flax or tow.

It shall be the duty of the occupier to observe Part I of these regulations.

It shall be the duty of all persons employed to observe Part II of these regulations.

Part I.—*Duties of occupiers*

1. In every room in which persons are employed the arrangements shall be such hat during working hours the proportion of carbonic acid in the air of the room shall not exceed 20 volumes per 10,000 volumes of air at any time when gas or oil is used or lighting (or within one hour thereafter) or 12 volumes per 10,000 when electric ight is used (or within one hour thereafter) or 9 volumes per 10,000 at any other time.

Provided that it shall be a sufficient compliance with this regulation if the proporion of carbonic acid in the air of the room does not exceed that of the open air outside by more than 5 volumes per 10,000 volumes of air.

2. In every room in which roughing, sorting, or hand-hackling is carried on, and in every room in which machine-hackling, carding, or preparing is carried on, and in which dust is generated and inhaled to an extent likely to cause injury to the health of the workers, efficient exhaust and inlet ventilation shall be provided to secure that the dust is drawn away from the workers at, or as near as reasonably possible to, the point at which it is generated.

For the purposes of this regulation the exhaust ventilation in the case of hand-hackling, roughing, or sorting shall not be deemed to be efficient if the exhaust opening at the back of the hackling pins measures less than 4 inches across in any direction, or has a sectional area of less than 50 square inches, or if the linear velocity of the draught passing through it is less than 400 feet per minute at any point within a sectional area of 50 square inches.

3. In every room in which hand-hackling, roughing, sorting, machine-hackling, carding, or preparing is carried on, an accurate thermometer shall be kept affixed; and the arrangements shall be such that the temperature of the room shall not at any time during working hours where hand-hackling, roughing, or machine-hackling is carried on, fall below 50 degrees, or where sorting, carding, or preparing is carried on below 55 degrees, and that no person employed shall be exposed to a direct draft from any air inlet, or to any draft at a temperature of less than 50 degrees.

Provided that it shall be a sufficient compliance with this regulation if the heating apparatus be put into operation at the commencement of work, and if the required temperature be maintained after the expiration of one hour from the commencement of work.

4. In every room in which wet-spinning is carried on, or in which artificial humidity of air is produced in aid of manufacture, a set of standardized wet and dry bulb thermometers shall be kept affixed in the center of the room or in such other position as may be directed by the inspector of the district by notice in writing, and shall be maintained in correct working order

Each of the above thermometers shall be read between 10 and 11 a. m. on every day that any person is employed in the room, and again between 3 and 4 p. m. on every day that any person is employed in the room after 4 p. m., and each reading shall be at once entered on the prescribed form.

The form shall be hung up near the thermometers to which it relates, and shall be forwarded, duly filled in, at the end of each calendar month to the inspector of the district. Provided that this part of this regulation shall not apply to any room in which the difference of reading between the wet and dry bulb thermometers is never less than 4 degrees, if notice of intention to work on that system has been given in the prescribed form to the inspector for the district, and a copy of the notice is kept affixed in the room to which it applies

5. The humidity of the atmosphere of any room to which Regulation 4 applies shall not at any time be such that the difference between the readings of the wet and dry bulb thermometers is less than 2 degrees

6. No water shall be used for producing humidity of the air, or in wet-spinning troughs, which is liable to cause injury to the health of the persons employed or to yield effluvia; and for the purpose of this regulation any water which absorbs from acid solution of permanganate of potash in four hours at 60 degrees more than 0.5 grain of oxygen per gallon of water, shall be deemed to be liable to cause injury to the health of the persons employed.

7. Efficient means shall be adopted to prevent the escape of steam from wet-spinning troughs.

8. The pipes used for the introduction of steam into any room in which the temperature exceeds 70 degrees, or for heating the water in any wet-spinning trough, shall, so far as they are within the room and not covered by water, be as small in diameter and as limited in length as is reasonably practicable, and shall be effectively covered with nonconducting material.

9. Efficient splash guards shall be provided and maintained on all wet-spinning frames of 2¼ inch pitch and over, and on all other wet-spinning frames unless waterproof skirts, and bibs of suitable material, are provided by the occupier and worn by the workers.

Provided that if the chief inspector is satisfied with regard to premises in use prior to 30th June, 1905, that the structural conditions are such that splash guards can not conveniently be used, he may suspend the requirement as to splash guards. Such suspension shall only be allowed by certificate in writing, signed by the chief inspector, and shall be subject to such conditions as may be stated in the certificate.

10. The floor of every wet-spinning room shall be kept in sound condition, and drained so as to prevent retention or accumulation of water.

11. There shall be provided for all persons employed in any room in which wet-spinning is carried on, or in which artificial humidity of air is produced in aid of manufacture, suitable and convenient accommodation in which to keep the clothing taken off before starting work, and in the case of a building erected after 30th June, 1905, in which the difference between the readings of the wet and dry bulb thermometers is at any time less than 4 degrees, such accommodation shall be provided in cloakrooms ventilated and kept at a suitable temperature and situated in or near the workrooms in question.

12. Suitable and efficient respirators shall be provided for the use of the persons employed in machine-hackling, preparing, and carding

PART II. *Duties of persons employed.*

13. All persons employed on wet-spinning frames without efficient splash guards shall wear the skirts and bibs provided by the occupier in pursuance of Regulation 9.

14. No person shall in any way interfere, without the concurrence of the occupier or manager, with the means and appliances provided for ventilation, or for the removal of dust, or for the other purposes of these regulations.

H. J. GLADSTONE,
One of His Majesty's Principal Secretaries of State.

HOME OFFICE, *Whitehall, 26th February, 1906*

FILE CUTTING BY HAND.

Whereas the process of file cutting by hand has been certified in pursuance of section 79 of the Factory and Workshop Act, 1901, to be dangerous:

I hereby, in pursuance of the powers conferred on me by that act, make the following regulations, and direct that they shall apply to all factories and workshops (including tenement factories and tenement workshops) or parts thereof in which the process of file cutting by hand is carried on. Provided that the chief inspector of factories may by certificate in writing exempt from all or any of these regulations any factory or workshop in which he is satisfied that the beds used are of such composition as not to entail danger to the health of the persons employed.

1. The number of stocks in any room shall not be more than one stock for every 350 cubic feet of air space in the room; and in calculating air space for the purpose of this regulation any space more than 10 feet above the floor of the room shall not be reckoned.

2. After the 1st day of January, 1901, the distance between the stocks measured from the center of one stock to the center of the next shall not be less than 2 feet 6 inches, and after the 1st day of January, 1905, the said distance shall not be less than 3 feet.

3. Every room shall have a substantial floor, the whole of which shall be covered with a washable material, save that it shall be optional to leave a space not exceeding 6 inches in width round the base of each stock.

The floor of every room shall be kept in good repair.

4. Efficient inlet and outlet ventilators shall be provided in every room. The inlet ventilators shall be so arranged and placed as not to cause a direct draft of incoming air to fall on the workmen employed at the stocks.

The ventilators shall be kept in good repair and in working order.

5. No person shall interfere with or impede the working of the ventilators.

6. Sufficient and suitable washing conveniences shall be provided and maintained for the use of the file cutters. The washing conveniences shall be under cover and shall comprise at least one fixed basin for every ten or less stocks. Every basin shall be fitted with a waste pipe discharging over a drain or into some receptacle of a capacity at least equal to one gallon for every file cutter using the basin. Water shall be laid on to every basin either from the main or from a tank of a capacity of not less than 1½ gallons to every worker supplied from such tank. A supply of clean water shall be kept in the said tank while work is going on at least sufficient to enable every worker supplied from such tank to wash.

7. The walls and ceiling of every room, except such parts as are painted or varnished or made of glazed brick, shall be limewashed once in every six months ending the 30th of June and once in every six months ending the 31st of December.

8. The floor and such parts of the walls and ceiling as are not limewashed and the benches shall be cleansed once a week.

9. If the factory or workshop is situated in a dwelling house the work of file cutting shall not be carried on in any room which is used as a sleeping place or for cooking or eating meals.

10. Every file cutter shall when at work wear a long apron reaching from the shoulders and neck to below the knees. The apron shall be kept in a cleanly state.

11. A copy of these regulations and an abstract of the provisions of the Factory and Workshop Act, 1901, shall be kept affixed in the factory or workshop in a conspicuous place.

12. It shall be the duty of the occupier to carry out Regulations 1, 2, 3, 4, 6, 7, and 11; except that, in any room in a tenement factory or tenement workshop which is let to more than one occupier, it shall be the duty of the owner to carry out these regulations, except the last clause of Regulation 6, which shall be carried out by the occupiers.

It shall be the duty of the occupier or occupiers to carry out Regulation 8.

It shall be the duty of the occupier or occupiers and of every workman to observe Regulations 5, 9, and 10

These regulations shall come into force on the 1st day of September, 1903.

A. AKERS-DOUGLAS,
One of His Majesty's Principal Secretaries of State.

HOME OFFICE, *Whitehall, 19th June, 1903.*

SPECIAL RULES FOR THE BOTTLING OF AERATED WATER.

(Form 273- A 1/3/01.)

Duties of occupiers.

1. They shall provide all bottlers with face guards, masks, or veils of wire gauze.

They shall provide all wirers, sighters, and labelers with face guards, masks, or veils of wire gauze, or goggles

2. They shall provide all bottlers with full-length gauntlets for both arms.

They shall provide all wirers, sighters, and labelers with gauntlets for both arms, protecting at least half of the palm and the space between the thumb and forefinger.

3 They shall cause all machines for bottling to be so constructed, so placed, or so fenced, as to prevent as far as possible, during the operation of filling or corking, a fragment of a bursting bottle from striking any bottler, wirer, sighter, labeler, or washer.

Duties of persons employed

4. All bottlers shall, while at work, wear face guards, masks, or veils of wire gauze.

All wirers, sighters, and labelers shall, while at work, wear face guards, masks, or veils of wire gauze, or goggles, except labelers when labeling bottles standing in cases.

5. All bottlers shall, while at work, wear on both arms, full-length gauntlets. All wirers, sighters, and labelers shall, while at work, wear on both arms gauntlets protecting at least half of the palm and the space between the thumb and forefinger; except labelers when labeling bottles standing in cases.

ARTHUR WHITELEGGE,
H. M. Chief Inspector of Factories.

AUGUST, 1897.

These rules are required to be posted up in conspicuous places in the factory or workshop to which they apply, where they may be conveniently read by the persons employed Any person who willfully injures or defaces them is liable to a penalty of five pounds [$24.33] Occupiers of factories and workshops, and persons employed therein, who are bound to observe any special rules, are liable to penalties for noncompliance (Factory and Workshop Act, 1891, sections 9 and 11).

The employer is required to provide the articles mentioned in the rules, and to take all reasonable precautions to the best of his power to enforce their use, but the responsibility for the actual wearing of them rests with the person employed.

SPINNING BY SELF-ACTING MULES.

Whereas certain machinery used in the process of spinning in textile factories, and known as self-acting mules, has been certified, in pursuance of section 79 of the Factory and Workshop Act, 1901, to be dangerous to life and limb;

I hereby, in pursuance of the powers conferred on me by that act, make the following regulations, and direct that they shall apply to all factories or parts thereof in which the process of spinning by means of self-acting mules is carried on:

1. In these regulations the term "minder" means the person in charge of a self-acting mule for the time being.

2. Save as hereinafter provided it shall be the duty of the occupier of a factory to observe Part I of these regulations: provided that it shall be the duty of the owner (whether or not he is one of the occupiers) of a tenement factory to observe Part I of these regulations, except so far as relates to such parts of the machinery as are supplied by the occupier.

It shall be the duty of the persons employed to observe Part II of these regulations, but it shall be the duty of the occupier, for the purpose of enforcing their observance, to keep a copy of the regulations in legible characters affixed in every mule room, in a conspicuous position where they may be conveniently read.

PART I.—*Duties of occupiers.*

3. After January 1st, 1906, the following parts of every self-acting mule shall be securely fenced as far as is reasonably practicable, unless it can be shown that by their position or construction they are equally safe to every person employed as they would be if securely fenced

(*a*) Back shaft scrolls and carrier pulleys and draw band pulleys.

(*b*) Front and back carriage wheels

(*c*) Faller-stops.

(*d*) Quadrant pinions

(*e*) Back of headstocks, including rim pulleys and taking-in scrolls.

(*f*) Rim band tightening pulleys, other than plate wheels, connected with a self-acting mule erected after January 1st, 1906.

PART II.—*Duties of persons employed.*

4. It shall be the duty of the minder of every self-acting mule to take all reasonable care to ensure

(*a*) That no child cleans any part or under any part thereof whilst the mule is in motion by the aid of mechanical power.

(*b*) That no woman, young person, or child works between the fixed and traversing parts thereof whilst the mule is in motion by the aid of mechanical power.

(*c*) That no person is in the space between the fixed and traversing parts thereof unless the mule is stopped on the outward run.

5. No self-acting mule shall be started or restarted except by the minder or at his express order, nor until he has ascertained that no person is in the space between the fixed and traversing parts thereof

A. AKERS-DOUGLAS,
One of His Majesty's Principal Secretaries of State.

HOME OFFICE, *Whitehall, 17th October, 1905.*

LOADING GOODS ON DOCKS AND WHARVES.

Whereas the processes of loading, unloading, moving, and handling goods in, on, or at any dock, wharf, or quay, and the processes of loading, unloading, and coaling any ship in any dock, harbor, or canal have been certified in pursuance of section 79 of the Factory and Workshop Act, 1901, to be dangerous:

I hereby, in pursuance of the powers conferred on me by that act, make the following regulations for the protection of persons employed in the processes or in any of them, and direct that they shall apply to all docks, wharves, quays, and ships as aforesaid.

These regulations shall come into force on the 1st of January, 1905, except that so much of Regulations 6 and 8 as require structural alterations shall come into force on the 1st of January, 1908.

Nothing in Parts II to VI, inclusive, of these regulations shall apply to the unloading of fish from a vessel employed in the catching of fish.

The secretary of state may by order in writing exempt from all or any of the regulations and for such time and subject to such conditions as he may prescribe any docks, wharves, or quays in respect of which application for such exemption shall have been made to him by the department of agriculture and technical instruction for Ireland or by the congested districts board for Ireland.

Definitions.

In these regulations:

"Processes" means the processes above mentioned; or any of them.

"Person employed" means a person employed in the above processes or any of them.

"Shallow canal" includes any of the following parts of a canal, canalized river, nontidal river, or inland navigation:

(a) Any part having no means of access to tidal waters except through a lock not exceeding ninety feet in length;

(b) Any part not in frequent use for the processes; and

(c) Any part at which the depth of water within fifteen feet of the edge does not ordinarily exceed five feet.

Duties.

It shall be the duty of the person having the general management and control of a dock, wharf, or quay to comply with Part I of these regulations; provided that if any other person has the exclusive right to occupation of any part of the dock, wharf, or quay, and has the general management and control of such part the duty in respect of that part shall devolve upon that other person; and further provided that this part of these regulations shall not apply to any shallow canal

It shall be the duty of the owner, master, or officer in charge of a ship to comply with Part II of these regulations.

It shall be the duty of the owner of machinery or plant used in the processes, and in the case of machinery or plant carried on board a ship not being a ship registered in the United Kingdom it shall also be the duty of the master of such ship, to comply with Part III of these regulations

It shall be the duty of every person who by himself, his agents, or workmen carries on the processes, and of all agents, workmen, and persons employed by him in the processes, to comply with Part IV of these regulations

It shall be the duty of all persons, whether owners, occupiers, or persons employed, to comply with Part V of these regulations.

Part VI of these regulations shall be complied with by the persons on whom the duty is placed in that part.

PART I.

1. The following parts of every dock, wharf, or quay shall, as far as is practicable, having regard to the traffic and working, be securely fenced so that the height of the fence shall be in no place less than two feet six inches, and the fencing shall be maintained in good condition ready for use.

(a) All breaks, dangerous corners, and other dangerous parts or edges of a dock, wharf, or quay.

(b) Both sides of such footways over bridges, caissons, and dock gates as are in general use by persons employed, and each side of the entrance at each end of such footway for a sufficient distance not exceeding five yards.

2. Provision for the rescue from drowning of persons employed shall be made and maintained, and shall include:

(a) A supply of life-saving appliances, kept in readiness on the wharf or quay, which shall be reasonably adequate having regard to all the circumstances.

(b) Means at or near the surface of the water at reasonable intervals, for enabling a person immersed to support himself or escape from the water, which shall be reasonably adequate having regard to all the circumstances.

3. All places in which persons employed are employed at night, and any dangerous parts of the regular road or way over a dock, wharf, or quay, forming the approach to any such place from the nearest highway, shall be efficiently lighted.

Provided that the towing path of a canal or canalized river shall not be deemed to be "an approach," for the purpose of this regulation.

PART II.

4. If a ship is lying at a wharf or quay for the purpose of loading or unloading or coaling there shall be means of access for the use of persons employed at such times as they have to pass from the ship to the shore or from the shore to the ship as follows:

(a) Where a gangway is reasonably practicable a gangway not less than 22 inches wide, properly secured, and fenced throughout on each side to a clear height of two feet nine inches by means of upper and lower rails, taut ropes or chains, or by other equally safe means.

(b) In other cases a secure ladder of adequate length.

Provided that nothing in this regulation shall be held to apply to cargo stages or cargo gangways, if other proper means of access is provided in conformity with these regulations.

Provided that as regards any sailing vessel not exceeding 250 tons net registered tonnage and any steam vessel not exceeding 150 tons gross registered tonnage this regulation shall not apply if and while the conditions are such that it is possible without undue risk to pass to and from the ship without the aid of any special appliances.

5. If a ship is alongside any other ship, vessel, or boat, and persons employed have to pass from one to the other, safe means of access shall be provided for their use, unless the conditions are such that it is possible to pass from one to the other without undue risk without the aid of any special appliance.

If one of such ships, vessels, or boats is a sailing barge, flat, keel, lighter or other similar vessel of relatively low free board the means of access shall be provided by the ship which has the higher free board

6 If the depth from the top of the coamings to the bottom of the hold exceeds six feet there shall be maintained safe means of access by ladder or steps from the deck to the hold in which work is being carried on, with secure hand-hold and foothold continued to the top of the coamings.

In particular such access shall not be deemed to be safe—

(*a*) Unless the ladders between the lower decks are in the same line as the ladder from the main deck, if the same is practicable having regard to the position of the lower hatchway or hatchways

(*b*) Unless the cargo is stowed sufficiently far from the ladder to leave at each rung of the ladder sufficient room for a man's feet.

(*c*) If there is not room to pass between a winch and the coamings at the place where the ladder leaves the deck.

(*d*) If the ladder is recessed under the deck more than is reasonably necessary to keep the ladder clear of the hatchway.

7. When the processes are being carried on between one hour after sunset and one hour before sunrise (*a*) the places in the hold and on the decks where work is being carried on, and (*b*) the means of access provided in pursuance of Regulations 4 and 5, shall be efficiently lighted, due regard being had to the safety of the ship and cargo, of all persons employed and of the navigation of other vessels and to the duly approved by-laws or regulations of any authority having power by statute to make by-laws or regulations subject to approval by some other authority

8. All iron fore and aft beams and thwart ship beams used for hatchway covering shall have suitable gear for lifting them on and off without it being necessary for any person to go upon them to adjust such gear

PART III.

9. All machinery and chains and other gear used in hoisting or lowering in connection with the processes shall have been tested, and shall be periodically examined. All such chains shall be effectually softened by annealing or firing when necessary, and all half-inch or smaller chains in general use shall be so annealed or fired once in every six months

If the chains are part of the outfit carried by a seagoing ship it shall be a sufficient compliance with this regulation as regards softening by annealing or firing of half-inch or smaller chains, that no such chains shall be used unless they have been so annealed or fired within six months preceding.

As regards chains, the safe-loads indicated by the test, the date of last annealing, and any other particulars prescribed by the secretary of state, shall be entered in a register which shall be kept on the premises, unless some other place has been approved in writing by the chief inspector.

10. All motors, cog-wheels, chain and friction-gearing, shafting and live electric conductors used in the processes shall (unless it can be shown that by their position and construction they are equally safe to every person employed as they would be if securely fenced) be securely fenced so far as is practicable without impeding the safe working of the ship and without infringing any requirement of the board of trade.

11. The lever controlling the link motion reversing gear of a crane or winch used in the processes shall be provided with a suitable spring or other locking arrangement.

12. Every shore crane used in the processes shall have the safe-load plainly marked upon it, and if so constructed that the jib may be raised or lowered, either shall have attached to it an automatic indicator of safe-loads or shall have marked upon it a table showing the safe-loads at the corresponding inclinations of the jib.

13. The driver's platform on every crane or tip driven by mechanical power and used in the processes shall be securely fenced, and shall be provided with safe means of access.

14. Adequate measures shall be taken to prevent exhaust steam from any crane or winch obscuring any part of the decks, gangways, stages, wharf, or quay, where any person is employed.

PART IV.

15. No machinery or gear used in the processes, other than a crane, shall be loaded beyond the safe-load; nor a crane, unless secured with the written permission of the owner by plates or chains or otherwise.

No load shall be left suspended from a crane, winch, or other machine unless there is a competent person actually in charge of the machine while the load is so left.

16. A boy under 16 shall not be employed as driver of a crane or winch, or to give signals to a driver, or to attend to cargo falls on winch-ends or winch-bodies.

17. Where in connection with the processes goods are placed on a wharf or quay other than a wharf or quay on a shallow canal:

(*a*) A clear passage leading to the means of access to the ship required by Regulation 4 shall be maintained on the wharf or quay; and

(*b*) If any space is left along the edge of the wharf or quay, it shall be at least three feet wide and clear of all obstructions other than fixed structures, plant and appliances in use.

18. No deck-stage or cargo-stage shall be used in the processes unless it is substantially and firmly constructed, and adequately supported, and, where necessary, securely fastened.

No truck shall be used for carrying cargo between ship and shore on a stage so steep as to be unsafe.

Any stage which is slippery shall be made safe by the use of sand or otherwise.

19. Where there is more than one hatchway, if the hatchway of a hold exceeding seven feet six inches in depth measured from the top of the coamings to the bottom of the hold is not in use and the coamings are less than two feet six inches in height, it shall either be fenced to a height of three feet, or be securely covered.

Provided that this regulation shall not apply during meal-times or other temporary interruptions of work during the period of employment.

And provided that until the 1st of January, 1908, the fencing may be the best the circumstances will allow without making structural alteration.

Hatch coverings shall not be used in connection with the processes in the construction of deck or cargo stages, or for any other purpose which may expose them to damage.

20. No cargo shall be loaded by a fall or sling at any intermediate deck unless a secure landing platform has been placed across the hatchway at that deck.

PART V.

21. No person shall, unless duly authorized, or in case of necessity, remove or interfere with any fencing, gangway, gear, ladder, life-saving means or appliances, lights, marks, stages, or other things whatsoever, required by these regulations to be provided.

22. The fencing required by Regulation 1 shall not be removed except to the extent and for the period reasonably necessary for carrying on the work of the dock or ship, or for repairing any fencing. If removed it shall be restored forthwith at the end of that period by the persons engaged in the work that necessitated its removal.

PART VI.

23. No employer of persons in the processes shall allow machinery or gear to be used by such persons in the processes that does not comply with Part III of these regulations.

24. If the persons whose duty it is to comply with Regulations 4, 5, and 7 fail so to do, then it shall also be the duty of the employers of the persons employed for whose use the means of access and the lights are required to comply with the said regulation within the shortest time reasonably practicable after such failure.

25. The certificate of the ship's register and any other certificate or register referred to in these regulations shall be produced by the person in charge thereof on the application of any of H. M. inspectors of factories.

A. Akers-Douglas,
One of His Majesty's Principal Secretaries of State.

Home Office, *Whitehall, 24th October, 1904.*

Factory Engines and Cars.

Whereas the use of locomotives, wagons, and other rolling stock on lines of rail or sidings in any factory or workshop or any place to which the provisions of section 79 of the Factory and Workshop Act, 1901, are applied by that act or on lines of rail or sidings used in connection with any factory, or workshop or any place as aforesaid, and not being part of a railway within the meaning of the Railway Employment (prevention of accidents) Act, 1900, has been certified in pursuance of the said section to be dangerous:

I hereby in pursuance of the powers conferred upon me by that act make the following regulations and direct that they shall apply to all places before mentioned.

These regulations shall come into force on the 1st day of January, 1907, except Regulations 1, 2, and 22, which shall come into force on the 1st day of January, 1908.

Subject to the exemptions below, it shall be the duty of (*i*) the occupier of any factory or workshop and any place to which any of the provisions of the Factory and Workshop Act, 1901, are applied, and (*ii*) the occupier of any line of rails or sidings used in connection with a factory or workshop, or with any place to which any of the provisions of the Factory and Workshop Act, 1901, are applied, to comply with Part I of these regulations.

And it shall be the duty of every person who by himself, his agents or workmen, carries on any of the operations to which these regulations apply, and of all agents, workmen and persons employed to comply with Part II of these regulations.

And it shall be the duty of every person who by himself, his agents, or workmen, carries on any of the operations to which these regulations apply, to comply with Part III of these regulations.

In these regulations.

Line of rails means a line of rails or sidings for the use of locomotives or wagons, except such lines as are used exclusively for (*a*) a gantry crane or traveling crane, or (*b*) any charging machine or other apparatus or vehicle used exclusively in or about any actual process of manufacture.

Wagon includes any wheeled vehicle or non-self-moving crane on a line of rails.

Locomotive includes any wheeled motor on a line of rails used for the movement of wagons and any self-moving crane.

Gantry means an elevated structure of wood, masonry, or metal, exceeding 6 feet in height and used for loading or unloading, which carries a line of rails, whereon wagons are worked by mechanical power.

Nothing in these regulations shall apply to:

(*a*) A line of rails of less than 3 feet gauge, and locomotives and wagons used thereon.

(*b*) A line of rails not worked by mechanical power

(*c*) A line of rails inside a railway goods warehouse.

(*d*) A line of rails forming part of a mine within the meaning of the Coal Mines Regulation Act, 1887, or of a quarry within the meaning of the Quarries Act, 1894, not being a line of rails within or used solely in connection with any factory or workshop not incidental to the maintenance or working of the mine or quarry or to the carrying on of the business thereof.

(*e*) Pit banks of mines to which the Metalliferous Mines Regulation Act, 1872, applies, and private lines of rails used in connection therewith.

(*f*) Lines of rails used in connection with factories or workshops, so far as they are outside the factory or workshop premises, and used for running purposes only.

(*g*) Wagons not moved by mechanical power.

(*h*) Buildings in course of construction.

(*i*) Explosive factories or workshops within the meaning of the Explosives Act, 1875.

(*j*) All lines and sidings on or used in connection with docks, wharves and quays not forming part of a factory or workshop as defined in section 149 of the Factory and Workshop Act, 1901.

(*k*) Wagon or locomotive building or repairing shops, and all lines and sidings used in connection with such shops if such shops are in the occupation of a railway company within the meaning of the Regulation of Railways Act, 1871.

(*l*) Depots or car-sheds being parts of tramway or light railway undertakings authorized by Parliament, and used for the storage, cleaning, inspection or repair of tramway cars or light railway cars.

PART I.

1. Point rods and signal wires in such a position as to be a source of danger to persons employed shall be sufficiently covered or otherwise guarded

2. Ground levers working points shall be so placed that men working them are clear of adjacent lines, and shall be placed in a position parallel to the adjacent lines, or in such other position, and be of such form as to cause as little obstruction as possible to persons employed.

3. Lines of rails and points shall be periodically examined and kept in efficient order, having regard to the nature of the traffic.

4. Every gantry shall be properly constructed and kept in proper repair. It shall have a properly fixed structure to act as a stop-block at any terminal point; and at

every part where persons employed have to work or pass on foot there shall be a suitable footway, and if such footway is provided between a line of rails and the edge of the gantry the same shall so far as is reasonably practicable, having regard to the traffic and working, be securely fenced at such a distance from the line of rails as to afford a reasonably sufficient space for such persons to pass in safety between the fence and a locomotive wagon or load on the line of rails.

5. Coupling poles or other suitable mechanical appliances shall be provided where required for the purpose of Regulation 11.

6 Proper sprags and scotches when required shall be provided for the use of persons in charge of the movement of wagons.

7. Where during the period between one hour after sunset and one hour before sunrise, or in foggy weather, shunting or any operations likely to cause danger to persons employed are frequently carried on, efficient lighting shall be provided either by hand lamps or stationary lights as the case may require at all points where necessary for the safety of such persons

8 The mechanism of a capstan worked by power and used for the purpose of traction of wagons on a line of rails shall be maintained in efficient condition and if operated by a treadle such treadle shall be tested daily before use.

PART II.

9. When materials are placed within 3 feet of a line of rails and persons employed are exposed to risk of injury from traffic by having to pass on foot over them or between them and the line, such material shall, as far as reasonably practicable, be so placed as not to endanger such persons, and there shall be adequate recesses at intervals of not more than 20 yards where the materials exceed that length

10. No person shall cross a line of rails by crawling or passing underneath a train or wagons thereon where there may be a risk of danger from traffic

11. Locomotives or wagons shall wherever it is reasonably practicable without structural alterations be coupled or uncoupled only by means of a coupling pole or other suitable mechanical appliance, except where the construction of locomotives or wagons is such that coupling or uncoupling can be safely and conveniently performed without any part of a man's body being within the space between the ends or buffers of one locomotive or wagon and another.

12 Sprags and scotches shall be used as and when they are required

13 Wagons shall not be moved or be allowed to be moved on a line of rails by means of a prop or pole, or by means of towing by a rope or chain attached to a locomotive or wagon moving on an adjacent line of rails when other reasonably practicable means can be adopted, provided that this shall not apply to the movement of ladles containing hot material on a line of rails in front of and adjacent to a furnace

In no case shall props be used for the above purpose unless made of iron, steel, or strong timber, hooped with iron, to prevent splitting.

14. Where a locomotive pushes more than one wagon, and risk of injury may thereby be caused to persons employed, a man shall, wherever it is safe and reasonably practicable, accompany or precede the front wagon or other efficient means shall be taken to obviate such risk.

Provided that this regulation shall not apply to the following:

(*a*) Fly shunting.

(*b*) Movement of wagons used for conveyance of molten or hot material or other dangerous substance.

15. No person shall be upon the buffer of a locomotive or wagon in motion unless there is a secure handhold and shall not stand thereon unless there is also a secure footplace; nor shall any person ride on a locomotive or wagon by means of a coupling pole or other like appliance.

16. No locomotive or wagon shall be moved on a line of rails until warning has been given by the person in charge to persons employed whose safety is likely to be endangered.

Provided that this regulation shall not apply to a self-moving crane within a building or to a charging machine or other vehicle so long as it is used in or about any actual process of manufacture.

17. Where persons employed have to pass on foot or work, no locomotive or wagon shall be moved on a line of rails during the period between one hour after sunset and one hour before sunrise, or in foggy weather, unless the approaching end, wherever it is safe and reasonably practicable, is distinguished by a suitable light or accompanied by a man with a lamp.

Provided that this regulation shall not apply to the movement of locomotives or wagons within any area which is efficiently lighted by stationary lights.

18. The driver in charge of a locomotive, or a man preceding it on foot, shall give an efficient sound signal as a warning on approaching any level crossing over a line of rails regularly used by persons employed, or any curve where sight is intercepted, or any other point of danger to persons employed.

19. A danger signal shall be exhibited at or near the ends of any wagon or train of wagons undergoing repair wherever persons employed are liable to be endangered by an approaching locomotive or wagon.

20. (a) The space immediately around such a capstan as mentioned in Regulation 8 shall be kept clear of all obstruction.

(b) Such capstan shall not be set in motion until signals have been exchanged between the man in charge of the capstan and the man working the rope or chain attached to it.

(c) No person under 18 years of age shall work such capstan.

21. No person under the age of 18 shall be employed as a locomotive driver, and no person under the age of 16 shall be employed as a shunter.

PART III.

22. All glass tubes or water gauges on locomotives or stationary boilers used for the movement of wagons shall be adequately protected by a covering or guard.

H. J. GLADSTONE,
One of His Majesty's Principal Secretaries of State.

HOME OFFICE, *Whitehall, 24th August, 1906.*

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

ILLINOIS.

Thirteenth Biennial Report of the Bureau of Labor Statistics of the State of Illinois. 1904. David Ross, Secretary of Board of Commissioners of Labor. viii, 665 pp.

This report consists of two parts, as follows: Part I, manufactures of Illinois, 133 pages; Part II, working time, earnings, and general conditions of coal miners, 527 pages.

MANUFACTURES.—This part presents the data collected and compiled by the United States census of manufactures of Illinois, made in 1905. The statistics presented are mainly for the year ending December 31, 1904. Comparisons are also made with the United States census of manufactures for 1900.

The following table presents, for the State, comparative statistics for the years 1904 and 1900:

STATISTICS OF MANUFACTURES, 1904 COMPARED WITH 1900.

Items	1904.	1900	Increase	Per cent of increase.
Number of establishments	14,921	14,374	547	3.8
Capital invested	$975,844,799	$732,829,771	$243,015,028	33.2
Number of salaried officials, clerks, etc	54,521	40,964	13,557	33.1
Total paid in salaries	$60,559,678	$40,549,245	$20,010,433	49.3
Average number of wage-earners:				
Males 16 years of age or over	314,091	275,006	39,085	14.2
Females 16 years of age or over	60,399	47,922	12,477	26.0
Children under 16 years of age	4,946	9,943	*a* 4,997	*a* 50.3
Total	379,436	332,871	46,565	14.0
Amount paid in wages to—				
Males 16 years of age or over	$187,568,896	$143,714,217	$43,854,679	30.5
Females 16 years of age or over	19,893,360	13,580,271	6,313,089	46.5
Children under 16 years of age	943,212	1,809,691	*a* 866,479	*a* 47.9
Total	$208,405,468	$159,104,179	$49,301,289	31.0
Miscellaneous expenses	$172,185,567	$118,047,771	$54,137,796	45.9
Cost of materials used	$840,057,316	$681,450,122	$158,607,194	23.3
Value of products, including custom work and repairing	$1,410,342,129	$1,120,868,308	$289,473,821	25.8

a Decrease.

With the exception of the figures relating to the employment of children under 16 years of age, all of the items presented in the table show large increases in 1904 as compared with 1900. This decrease in the number of children employed (50.3 per cent) shows that the employment of child labor, especially in the larger manufacturing industries, is being rapidly lessened.

In Chicago in 1904 there were 8,159 establishments engaged in manufacturing industries, representing an invested capital of

$637,743,474. There were employed by these establishments 40,276 salaried officials, clerks, etc., to whom were paid salaries aggregating $45,601,201, and 241,984 wage-earners, to whom were paid wages aggregating $136,404,696. Miscellaneous expenses amounted to $96,298,031. The cost of materials used was $589,913,993, and the value of products was $957,886,217.

In the six leading manufacturing industries of the city (electrical machinery, apparatus, and supplies, foundry and machine shop products, furniture, iron and steel, printing and publishing, and slaughtering and meat packing, wholesale) 1,884 establishments were engaged, representing an invested capital of $221,803,149. There were employed by these establishments 17,775 salaried officials, clerks, etc., to whom were paid salaries aggregating $19,869,755, and 82,266 wage-earners, to whom were paid wages aggregating $49,186,445. Miscellaneous expenses amounted to $35,514,610. The cost of materials used was $318,815,853, and the value of products was $454,977,196.

WORKING TIME, EARNINGS, AND GENERAL CONDITIONS OF COAL MINERS.—This investigation, for the calendar year 1903, embraces 21 of the coal-producing counties of the State, the mines canvassed being located at or contiguous to 58 cities and towns. Schedules were obtained from 10,426 workmen, of whom 8,818 were miners of coal and 1,608 other employees. The total workmen represented 37 separate occupations, the 1,608 other than miners proper representing 36 occupations. The data are presented in 16 tables.

Summarizing the returns it was found that the average yearly earnings of the 10,426 coal-mine employees was $541, while for the miners proper it was $527. The following statement shows for six wage groups the percentage of all employees and the percentage of miners proper whose yearly earnings fall within each specified group:

PER CENT OF COAL-MINE EMPLOYEES WHOSE YEARLY EARNINGS FALL WITHIN CERTAIN SPECIFIED WAGE GROUPS

Employees.	Number	Per cent earning yearly—					
		Under $500.	$500 or under $600.	$600 or under $700.	$700 or under $800.	$800 or under $1,000.	$1,000 or over.
All occupations	10,426	43.32	23.73	15.96	9.02	6.24	1.73
Miners	8,818	46.50	24.24	14.78	8.04	5.11	1.33

From the above it is seen that 67.05 per cent of the employees, all occupations considered, earn under $600 per annum, while for miners alone 70.74 per cent earn under $600 per annum.

Of the total employees, 10,363 reported as to nativity, 5,825, or 56.21 per cent, of the number being native born and 4,538, or 43.79 per cent, being foreign born. Of the foreign born, 44.86 per cent were Austrians, Italians, Poles, and Russians, 50.30 per cent English, French, German, Irish, Scotch, Swede, and Welsh, and the remaining 4.84 per cent were other foreign born. Of the 8,775 miners who reported as to nativity, 54.48 per cent were native born and 45.52 per cent foreign born, and of the 1,588 other employees who reported as to nativity 65.74 per cent were native born and 34.26 per cent foreign born.

Relative to stability of employment, it was found that of the 8,818 miners 765, or 8.68 per cent, had been employed less than 5 years, 6,476, or 73.44 per cent, had been employed from 5 to 24 years, and 1,577, or 17.88 per cent, had been employed from 25 to 50 years or over; and that of the 1,608 other employees 280, or 17.41 per cent, had been employed less than 5 years, 1,116, or 69.40 per cent, had been employed from 5 to 24 years, and 212, or 13.19 per cent, had been employed from 25 to 50 years or over.

There were 24 employees (13 miners and 11 others) whose ages were reported as 16 years or under, 9,461 employees (7,988 miners and 1,473 others) whose ages were reported as over 16 years but under 50, and 941 employees (817 miners and 124 others) whose ages were reported as 50 years or over.

Returns were received from 7,035 mine employees (6,023 miners and 1,012 others) who owned and rented homes, this being 67.48 per cent of the total employees considered. There were 3,128 employees who owned homes of an average value of $1,016.60 each. Of this number 2,672 were miners who owned homes of an average value of $996.27 each, and 456 other employees who owned homes of an average value of $1,132.45 each. There were 3,907 employees who rented homes at an average yearly rental of $82.27 each. Of this number 3,351 were miners who rented homes at an average yearly rental of $81.72 each, and 556 other employees who rented homes at an average yearly rental of $85.60 each. Homes to the number of 997 were rented from the mining companies, and to the number of 2,910 from individuals. In connection with the homes owned and rented are shown the materials (brick or wood) of which the buildings are constructed, the condition of homes and neighborhood surroundings, and the health of workmen and of families.

Of the 10,426 coal-mine employees, 7,025 were married, 3,382 were single, and 19 were widowed. Of the 8,818 who were miners, 6,006 were married, 2,793 were single, and 19 were widowed; and of the 1,608 other employees, 1,019 were married and 589 were single. There were 3,811 workmen who reported as to their children attending school, and the number of children so reported as attending or having attended school was 7,817—7,197 in public, 90 in private, and 530 in parochial schools. There were 889 other children of other than miners who were reported at work—735 at work about the mines, 145 at other employment, and 9 were learning trades.

MISSOURI.

Twenty-seventh Annual Report of the Bureau of Labor Statistics and Inspection of the State of Missouri, for the year ending November 5, 1905. William Anderson, Commissioner. 476 pp.

The following are the subjects presented in this report: Surplus products of counties, 75 pages; Government land in Missouri, 5 pages; statistics of manufactures, 218 pages; public utility plants, 18 pages; labor organizations, 95 pages; free employment offices, 8 pages; chronology of Missouri bureau of labor, 10 pages; labor laws, 34 pages.

Surplus Products.—Under this head are given for each of the 114 counties of the State the surplus products shipped in 1904, together with the values of the same, which aggregated $240,486,463.

Statistics of Manufactures.—Summarized returns covering 3,336 establishments in 64 industrial groups show for 1904 a total invested capital of $185,515,244, a total value of materials used of $211,702,438, and a total value of products of $348,344,052. During the year there were employed 116,964 males and 28,958 females, and there was paid out in wages a total of $65,724,234. The greatest number of children under 16 years of age employed at any one time during the year was 6,373—4,391 males and 1,982 females.

The following table shows for 1904, for each of the 22 industries in the State, which paid out in wages during the year a total exceeding $1,000,000, number of establishments, capital invested, value of products, amount paid in wages, and number of employees by sex:

STATISTICS OF 22 MANUFACTURING INDUSTRIES, 1904.

Industry	Establishments.	Capital invested.	Value of products.	Wages paid.	Employees.	
					Male.	Female.
Bakeries	340	$2,996,413	$9,962,070	$1,965,078	2,729	1,295
Boots and shoes	20	4,836,301	21,321,303	4,657,939	7,033	4,313
Brick and tile	98	6,343,809	4,902,318	2,298,028	5,720	17
Candy and confectionery	36	2,108,002	6,405,247	1,244,146	1,770	2,008
Carriages and wagons	172	2,991,126	7,162,954	1,816,736	3,544	116
Car works	4	6,505,028	11,702,123	2,501,575	5,058	25
Cigars and tobacco	105	3,477,845	18,125,358	2,056,164	2,022	1,070
Clothing	112	4,093,630	11,907,304	3,240,342	2,111	8,115
Cooperage	62	1,618,507	4,809,030	1,269,327	3,801	9
Drugs and chemicals	55	3,718,022	7,099,564	1,183,947	1,181	886
Flour mills	296	6,778,365	28,397,008	1,319,898	2,648	43
Foundries and machine shops	143	8,800,222	11,345,852	4,309,979	8,105	228
Furniture	72	2,871,322	5,936,353	1,944,856	3,968	189
Glass	22	2,626,150	2,305,852	1,267,135	2,342	35
Lime and cement	16	6,711,011	1,656,806	1,025,723	1,390	7
Liquors, malt	41	46,762,919	19,372,375	4,461,128	6,186	434
Lumber, sawed	47	3,741,987	3,003,808	1,544,797	5,869	59
Meat packing	16	3,554,765	59,917,970	2,269,311	4,781	114
Planing mills	80	3,829,775	4,758,047	1,518,020	3,084	33
Printing and binding	713	8,458,807	13,947,344	5,605,178	7,332	2,681
Smelters	16	9,335,841	9,032,376	1,097,559	2,787	9
Stoves and ranges	17	2,084,947	6,883,025	2,116,474	3,379	42

The report contains additional tables, which show for the various industries the number and wages of salaried employees, by sex, and the classified weekly earnings of adult males, adult females, and children under 16 years of age; and by occupations for skilled labor in each industry the number of males and females employed, weekly wages paid, hours of labor per day and per week, and wage changes during 1904.

PUBLIC UTILITY PLANTS.—This presentation shows, for 136 telephone companies, 81 electric light and power plants, 49 waterworks, and 20 gas plants, capital invested, receipts and expenditures, number of employees, wages paid, etc. In 1904 the telephone companies paid $953,520 in wages to 911 male and 994 female employees, the electric light and power plants $244,406 in wages to 429 male and 7 female employees, the waterworks $2,143,158 in wages to 1,271 male and 13 female employees, and the gas plants $979,360 in wages to 3,319 male and 45 female employees.

LABOR ORGANIZATIONS.—This part of the report presents statistics for 1904 relative to the 624 labor organizations of the State. The membership of the organizations was 79,630 males and 2,403 females, a total of 82,033, or a decrease over 1903 of 16,069. Of the total adult wage-earners employed in the various trades represented, 80.82 per cent were organized. The average number of hours constituting a day's work in 1904 was 9.21, as compared with 9.33 in 1903, while the average minimum wage per hour in 1904 was 28.69 cents, as compared with 28.39 cents in 1903. During 1904 the average number of days employed was 258. On out-of-work, sick and accident, death, and strike benefits the organizations expended $319,243. Out-of-work benefits were paid by 40 organizations, sick and accident benefits by 144, death benefits by 331, and strike benefits by 362. The average amount per week paid for sick and accident benefits was $4.72 and for strike benefits $5.51. The average amount of each death benefit paid was $110.11. There were 119 strikes and lockouts during the year, of which 63 were settled satisfactorily to the unions involved. The number of persons involved was 8,988, and the amount expended by the organizations in support of the strikes was $110,837. Wages aggregating $250,101 were lost to members through strikes during the year. Increase of wages during the year was reported by 40 organizations, reduction of hours of labor by 18. Appeals for arbitration were made in 60 instances, resulting in the 60 disputes being settled by that method. The unions reported 1,477 accidents during 1904, of which 152 were fatal.

FREE EMPLOYMENT OFFICES.—Returns from the free employment offices, located in St. Louis, Kansas City, and St. Joseph, for the year ending September 30, 1905, show 13,948 applications for positions (12,072 by males and 1,876 by females), 14,204 applications for help

(10,586 for male help and 3,618 for female help), and that 8,400 positions were filled (7,322 by males and 1,078 by females).

LABOR LAWS.—This consists of a compilation of the various laws of the State relating to labor.

NEW YORK.

Sixth Annual Report of the Department of Labor, for the twelve months ended September 30, 1906. Transmitted to the legislature January 2, 1907. P. Tecumseh Sherman, commissioner. Part I, 280 pp.; Part II, 275 pp.; Part III, 487 pp.; Part IV, 894 pp.

Part I consists of the annual report of the commissioner of labor relative to the operation of the department of labor, with recommendations on labor questions; preliminary reports of the bureau of factory inspection, the bureau of mediation and arbitration, and the final report of the free employment bureau in New York City; legislation and decisions of courts on questions affecting the interest of working people, and labor laws in force in the State October 1, 1906; Part II, Twenty-first annual report of the bureau of factory inspection; Part III, Twentieth annual report of the bureau of mediation and arbitration; Part IV, Twenty-fourth annual report of the bureau of labor statistics.

FREE PUBLIC EMPLOYMENT BUREAU.—During the seven months from October 1, 1905, to April 30, 1906, at which time the bureau was abolished, there were 2,790 applicants (1,440 males and 1,350 females) for positions, and 2,255 applications (571 for males and 1,684 for females) for help. The number of situations filled was 1,677, of which 433 were filled by males and 1,244 by females.

Twenty-fourth Annual Report of the Bureau of Labor Statistics, for the year ending September 30, 1906.

This part embraces the following subjects: economic conditions of labor, 40 pages; trade unions in 1906, 20 pages; sanitary conditions in the printing trade, 84 pages; appendixes containing statistical tables, 830 pages; regulations in use in England for dangerous or unhealthful industries, 50 pages; copies of forms used, 8 pages.

THE STATE OF EMPLOYMENT.—This chapter presents a continuous record, showing the number and percentage of members of labor unions unemployed in 1906, causes of and duration of idleness as reported by the officers of unions representing approximately one-fourth the membership of trade unions in the State, and comparative statistics for preceding years. The smallest number of unions reporting for any month in 1906 was 190 and the largest number was 195, and the work people embraced by these monthly reports varied from 84,539 to 94,571. From the returns it appears that the state of employment was more favorable in 1906 than in either 1902, 1903, 1904, or 1905. The percentage of unemployment for those reporting for the five years being as follows: 1902, 14.8; 1903, 17.5; 1904, 16.9; 1905, 11.2, and 1906, 9.3. With the exception of the metals, machinery, and shipbuilding trades and the printing and binding trades, the average percentage of unemployment was lower in 1906 than in any of the four preceding years.

The following table shows the number and percentage of unionists idle at the end of March and September, 1905 and 1906, by causes:

NUMBER AND PER CENT OF MEMBERS OF LABOR UNIONS IDLE AT THE END OF MARCH AND SEPTEMBER, 1905 AND 1906, BY CAUSES.

Cause.	End of March, 1905.		End of September, 1905		End of March, 1906		End of September, 1906.	
	Number idle.	Per cent.	Number idle.	Per cent	Number idle.	Per cent.	Number idle.	Per cent.
Lack of work	28,759	52.4	11,525	62.5	16,719	44.9	11,645	54.0
Lack of material	1,343	2.4	655	3.6	1,397	3.7	753	3.5
The weather	16,005	29.1	739	4.0	10,682	28.7	666	3.1
Labor disputes	4,814	8.8	2,403	13.0	4,787	12.9	3,919	18.1
Disability	2,942	5.4	2,577	14.0	3,005	8.1	3,127	14.5
Other causes	794	1.4	438	2.4	552	1.5	1,216	5.6
Reason not stated	259	.5	93	.5	95	.2	247	1.2
Total	54,916	100.0	18,430	100.0	37,237	100.0	21,573	100.0

WAGES AND EARNINGS.—Returns received from trade unions for the year 1906 show that an average weekly increase of $1.91 in wages was obtained by 77,799 males, and that 583 females obtained an average weekly increase of $1.11, while 397 males suffered an average weekly decrease of $1.90 in wages.

The following table shows the average earnings for the first and third quarters and for six months, as reported by trade unions in 1906:

NUMBER AND AVERAGE EARNINGS OF ORGANIZED WORKING PEOPLE REPORTING FOR THE FIRST AND THIRD QUARTERS OF 1906, BY SEX AND GROUPS OF INDUSTRIES.

Industry group.	Males.					Females.				
	Number reporting.		Average earnings.			Number reporting.		Average earnings.		
	First quarter.	Third quarter.	First quarter.	Third quarter.	Six months	First quarter.	Third quarter.	First quarter.	Third quarter.	Six months
Building, stone working, etc.	135,676	132,657	$220.19	$251.20	$471.39	....	.....	.....	.....	......
Transportation	62,832	59,233	209.94	219.09	429.03	120	141	$127.62	$143.53	$271.15
Clothing and textiles	27,489	28,508	161.86	157.54	319.40	6,175	6,124	93.54	84.88	178.42
Metals, machinery, and shipbuilding	31,721	35,784	212.36	222.91	435.27	32	29	50.15	43.07	93.22
Printing, binding, etc.	25,645	25,362	251.58	227.34	478.92	1,386	1,338	99.96	104.56	204.52
Wood working and furniture	11,803	12,478	194.00	209.43	403.43	55	83	97.91	98.95	196.86
Food and liquors	13,564	13,492	184.32	196.14	380.46	.....	.....	.....	.....	......
Theaters and music	10,208	10,336	367.26	294.01	661.27	707	696	433.83	351.16	784.99
Tobacco	9,603	9,369	146.96	149.32	296.28	2,680	2,428	132.05	144.89	276.94
Restaurants and retail trade	7,122	7,400	175.66	180.65	356.31	304	361	84.79	136.41	221.20
Public employment	9,509	9,115	223.74	231.96	455.70	172	114	119.60	132.96	252.56
Stationary enginemen	11,448	12,612	229.16	271.42	500.58	.....	.....	.....	.....	......
Miscellaneous	9,471	10,021	185.38	175.18	360.56	53	34	101.22	80.60	181.82
Total	369,091	366,365	212.26	225.36	437.62	11,684	11,348	124.22	118.14	242.36

Trend of Wages.—Under this title the value of wages relative to their purchasing power is discussed. A table is presented for the year 1897 and the years 1902 to 1906, showing the average daily wages of trade unionists in the several occupations. The average yearly earnings, based on the average daily earnings in connection with the average days of work per year, were $581 in 1897, and in 1906, $853, an increase of 47 per cent.

Hours of Labor.—Of over 1,000,000 operatives employed in factories visited during the year, 53.6 per cent were working less than 58 hours per week. In 1901 the percentage of such employees working less than 58 hours per week was 38. Returns from workingmen's associations show that during the year 1906, 18,941 working people had their hours of labor reduced. The number of persons so benefited in 1906 was greater than for 1904 or 1905, but less than in the years 1901 to 1903. No cases of increased hours were reported in 1906. The number affected by increased hours of labor for each of the five preceding years was 319 in 1901, 5,234 in 1902, 342 in 1903, 66 in 1904, and 722 in 1905.

The following table shows, by industries, the reductions in hours of labor per week and the number of organized workers affected:

REDUCTIONS IN WEEKLY HOURS OF LABOR OF MEMBERS OF LABOR ORGANIZATIONS AND MEMBERS AFFECTED, AS REPORTED BY LABOR UNIONS FOR THE YEAR ENDING SEPTEMBER 30, 1906

Industry	Members affected.	Total hours.	Average hours per week.	Members obtaining the eight-hour day.
Building, stone working, etc	3,857	17,671	4.6	1,267
Transportation	952	11,228	11.8	....
Clothing and textiles	60	300	5.0	....
Metals, machinery, and shipbuilding	1,201	4,885	4.1	30
Printing, binding, etc	4,893	27,168	5.6	4,653
Wood working and furniture	261	747	2.9	....
Food and liquors	2,400	14,763	6.2	....
Restaurants and retail trade	71	398	5.6	....
Stationary enginemen	3,345	90,165	27.0	3,299
Miscellaneous	1,901	17,289	9.1	942
Total	18,941	184,614	9.8	10,191

Trade Unions.—On September 30, 1906, there were in the State 2,420 organizations, having a membership of 398,494. This is an increase for the year of 18 unions and 15,258 members.

The following table shows the number of unions, and the number of members, by sex, in each year from 1894 to 1906:

NUMBER OF TRADE UNIONS AND MEMBERSHIP, BY SEX, 1894 TO 1906.

Date	Number of unions.	Membership.		
		Males.	Females.	Total.
July 1, 1894	860	149,709	7,488	157,197
July 1, 1895	927	170,129	10,102	180,231
October 31, 1896	962	(a)	(a)	170,206
September 30, 1897	1,009	162,750	5,704	168,454
September 30, 1898	1,087	163,562	7,505	171,067
September 30, 1899	1,320	200,932	8,088	209,020
September 30, 1900	1,635	233,553	11,828	245,381
September 30, 1901	1,871	261,523	14,618	276,141
September 30, 1902	2,229	313,592	15,509	329,101
September 30, 1903	2,583	380,845	14,753	395,598
September 30, 1904	2,504	378,859	12,817	391,676
September 30, 1905	2,402	370,971	12,265	383,236
September 30, 1906	2,420	386,869	11,625	398,494

a Not separately reported

Of the 2,420 unions, with a total membership of 398,494 on September 30, 1906, 678 unions, having a membership of 260,008, were located in New York City. There were 19 unions with a membership of 3,103 composed entirely of women, and in the unions composed of both males and females there were 8,522 female unionists, making a total of 11,625 female members of trade unions, of whom 6,210 were in the clothing and textile industries, 2,429 in the tobacco industries, and 1,341 in the printing and binding industries.

The following table gives the membership of trade unions, by industries, on July 1 for the years 1894 and 1895, October 31, 1896, and September 30, for the years from 1897 to 1906:

MEMBERSHIP OF TRADE UNIONS, BY INDUSTRIES, 1894 TO 1906.

Industry	1894.	1895	1896.	1897.	1898.	1899.
Building, stone working, etc	49,131	53,683	56,363	53,983	59,676	70,031
Clothing and textiles	39,162	51,921	30,093	32,147	26,444	29,644
Metals, machinery, and shipbuilding	8,309	9,328	11,333	10,124	11,621	17,779
Transportation	18,773	19,134	23,469	23,943	19,065	25,981
Printing, binding, etc	11,059	11,998	13,948	13,413	15,090	16,051
Tobacco	8,722	9,089	9,709	9,007	8,889	8,886
Food and liquors	5,340	6,210	7,153	6,621	6,469	7,935
Theaters and music	5,688	7,327	7,306	6,920	9,346	9,518
Wood working and furniture	5,169	4,477	4,059	3,975	4,468	6,571
Restaurants and retail trade	1,564	1,860	2,437	2,217	2,419	3,551
Public employment	1,964	1,964	993	1,067	1,880	3,797
Stationary enginemen	975	1,105	1,239	2,948	3,738	5,204
Miscellaneous	1,341	2,135	2,104	2,089	1,962	4,072
Total	157,197	180,231	170,206	168,454	171,067	209,020

MEMBERSHIP OF TRADE UNIONS, BY INDUSTRIES, 1894 TO 1906—Concluded.

Industry.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Building, stone working, etc	79,705	84,732	90,817	110,173	119,597	133,608	147,393
Clothing and textiles	28,783	41,843	46,954	40,981	35,090	34,406	35,259
Metals, machinery, and shipbuilding	24,153	25,616	38,201	48,230	38,971	34,163	35,936
Transportation	32,979	37,923	42,824	63,791	72,257	62,871	61,540
Printing, binding, etc	17,145	18,061	21,170	23,915	25,348	26,192	26,740
Tobacco	12,349	10,210	11,049	12,435	12,354	12,115	11,888
Food and liquors	8,987	8,729	12,528	15,757	15,404	13,603	13,513
Theaters and music	9,698	11,688	11,588	11,674	13,614	13,224	13,439
Wood working and furniture	8,037	8,113	12,247	16,910	12,771	11,179	12,577
Restaurants and retail trade	5,156	6,391	8,810	12,380	12,764	10,307	7,903
Public employment	7,148	8,142	9,160	9,753	9,538	9,346	9,419
Stationary enginemen	5,666	7,566	8,111	11,166	12,702	12,037	12,050
Miscellaneous	5,575	7,124	15,642	18,418	12,276	10,005	10,237
Total	245,381	276,141	329,101	395,598	391,676	383,236	398,494

The number and membership of trade unions in New York City and for the State, exclusive of New York City, for the years ending September 30, 1898 to 1906, are shown in the following table:

NUMBER AND MEMBERSHIP OF TRADE UNIONS IN NEW YORK CITY AND OTHER LOCALITIES IN THE STATE, YEARS ENDING SEPTEMBER 30, 1898 TO 1906.

Year ending September 30—	Number of unions in—			Membership of unions in—		
	New York City.	Other localities	The State.	New York City.	Other localities	The State.
1898	440	647	1,087	125,429	45,638	171,067
1899	477	843	1,320	141,687	67,333	209,020
1900	502	1,133	1,635	154,504	90,877	245,381
1901	515	1,356	1,871	174,022	102,119	276,141
1902	579	1,650	2,229	198,055	131,046	329,101
1903	653	1,930	2,583	244,212	151,386	395,598
1904	670	1,834	2,504	254,719	136,957	391,676
1905	667	1,735	2,402	251,277	131,959	383,236
1906	678	1,742	2,420	260,008	138,486	398,494

HEALTH OF PRINTERS.—This section is a study of sanitary conditions in the printing trade, but since it has been incorporated in the article on industrial hygiene it is not necessary to give it extended notice here. Following a discussion of the effect of occupations in general upon the health of the employed are given statistics compiled by the United States Bureau of the Census, which show that the highest mortality among wage-earners results from consumption. The average death rate from this cause in the mechanical and manufacturing trades in 1900 was 2.62. In the printing trades alone the death rate from consumption was 4.35, this rate being exceeded only in the marble and stone cutting trades and in cigar making. It is also shown that of the persons employed in the printing trades who died during the census year from all causes, but 35.1 per cent had attained the age of 45 years, 14.3 per cent of the deaths having occurred under the age of 25.

Visits were made to ten establishments in New York City, including some of the largest, and from the records of the employees' mutual benefit societies data were secured which, taken in connection with the conditions described, bear out the theory that the sickness and mortality among compositors is due in a great degree to the sanitary conditions of their workrooms. Establishment A is described as being very unclean and insanitary. During the five years 1901 to 1905, 8 deaths (or 6.1 per cent of the employees sick) occurred among the membership of its mutual benefit organization, 4 of these being due to tuberculosis. The number of cases of sickness was 14.9 per cent of the average membership. Contrasted with this is establishment B, which was noted as being clean and well ventilated. In this establishment the number of cases of sickness was but 9.7 per cent of the average membership and the number of deaths but 4.3 per cent of the number sick.

PENNSYLVANIA.

Annual Report of the Secretary of Internal Affairs of the Commonwealth of Pennsylvania. Vol. xxxiv, 1906. Part III, Industrial Statistics. John L. Rockey, Chief of Bureau. pp. 287.

This report, for 1906, embraces data gathered from 3,057 establishments of the State engaged in manufacturing and mining industries, giving a record of the capital invested, value of products, average value of product per employee, days in operation, number of working people (men, women, and minors), aggregate wages paid, average yearly earnings, average daily wages, etc. Data relative to strikes and lockouts are reported for bituminous coal mining and for the coke, iron and steel, tin plate, and a few minor industries. The information gives for the various disputes cause of dispute, number of persons involved, days lost, method of settlement, and result. Data are further presented for the different industries showing the number of establishments making returns and giving statistics pertaining to number of employees owning their homes, average rent paid by those renting, working hours per week, nationality of employees, accidents, causes of time lost, and trade conditions.

The 3,057 establishments considered in this investigation had invested in plants and working capital a total of $932,842,453, and the market value of production for the year aggregated $1,630,168,935. The various industries were in operation during the year an average of 287 days and employed a total of 754,986 wage-earners (647,670 men, 75,208 women, and 32,108 minors), to whom were paid in wages the sum of $371,701,476 to the men, $23,484,131 to the women, and $6,955,675 to the minors. The average yearly earnings of all wage-earners was $535.05 (of the men $573.91, of the women $312.25, and of the minors $216.63). The average daily wage of all employees was $1.86. For each employee the average value of product for the year amounted to $2,159.20.

IRON, STEEL, AND TIN-PLATE PRODUCTION.—The following summary statements show the more important items for the year 1906 relating to the production of pig iron, steel, rolled iron and steel, and tin plate:

PIG IRON.

Capital invested	$132, 255, 799
Gross tons of production	11, 214, 292
Realized value	$187, 900, 541
Value of basic material	$92, 507, 500
Average days in operation	335
Total adult male employees	18, 612
Aggregate wages paid adult male employees	$12, 056, 135
Average yearly earnings of adult male employees	$647. 76
Average daily wages of adult male employees	$1. 93
Cost of labor per ton	$1. 07
Tonnage per man per day	1. 8

STEEL.

Gross tons of production.	
Bessemer	4, 841, 926
Open-hearth-acid process	1, 091, 115
Open-hearth, basic process	6, 385, 732
Crucible and other processes	93, 634
Total	12, 412, 407

ROLLED IRON AND STEEL.

Capital invested	$345, 563, 126
Gross tons of production:	
Muck and scrap bar	123, 457
Slabs, blooms, billets, tin-plate and sheet bars, etc	3, 022, 950
Rails	1, 300, 112
Iron and steel structural shapes	1, 676, 279
Cut nails and spikes	29, 850
Plates and sheets ([a])	2, 643, 499
Other rolled products	4, 605, 951
Total	13, 402, 098
Value of product (not including the black-plate works)	$473, 883, 481
Total employees (not including those in black-plate works)	128, 209
Adult male employees (not including those in black-plate works)	126, 739
Aggregate wages paid all employees	$82, 623, 830
Aggregate wages paid adult male employees	$82, 210, 762
Average days in operation	302
Average yearly earnings of all employees	$644. 45
Average yearly earnings of adult male employees	$648. 66

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[a] Including 345,180 tons of black plate and other sheets made by the black-plate works.

Average daily wages of all employees	$2.13
Average daily wages of adult male employees	$2.15
Average value per ton	$36.29
Cost of labor per ton	$6.33

TIN PLATE (BLACK-PLATE WORKS).

Capital invested (16 plants)	$8,301,716
Pounds of production of black plate (tinned, not tinned, and terne)	684,405,527
Value of production of black plate	$23,722,553
Pounds of production of sheets and plates other than black	88,798,954
Value of production of sheets and plates other than black	$2,228,555
Total employees	8,685
Adult male employees	8,373
Aggregate wages paid all employees	$6,180,265
Aggregate wages paid adult male employees	$6,073,758
Average days in operation	274
Average yearly earnings of all employees	$711.60
Average yearly earnings of adult male employees	$725.40
Average daily wages of all employees	$2.60
Average daily wages of adult male employees	$2.65

TIN PLATE (DIPPING WORKS)

Capital invested (4 plants)	$1,401,080
Pounds of production of tin and terne plate	26,071,835
Value of product	$1,504,672
Total employees	220
Male employees	187
Aggregate wages paid all employees	$112,594
Aggregate wages paid male employees	$103,080
Average days in operation	285
Average yearly earnings of all employees	$511.79
Average yearly earnings of male employees	$551.23
Average daily wages of all employees	$1.80
Average daily wages of male employees	$1.93

Returns from 51 pig-iron companies showed that 672 wage-earners owned their homes, that the average annual rental for those paying rent was $78, that the average hours the furnaces were in blast were 124 per week, and that of the 10,991 persons for whom nationality was reported 5,269 were Americans. During the year there were 18 fatal and 103 nonfatal accidents in the industry. Returns from 131 iron and steel companies showed that 5,540 wage-earners owned their homes, that the average annual rental for those paying rent was $135, that the average hours of work per week were 69, and that of the 59,048 employees for whom nationality was reported 28,050 were Americans. In the industry during the year there were 58 fatal and 2,609 nonfatal accidents. Returns from 11 companies in the tin-plate industry showed that 42 wage-earners owned their homes, that the average annual rental for those paying rent was $209, that the average hours of work per week were 51, and that of the 2,035 employees for whom nationality was reported 1,315 were Americans.

STATISTICS OF COAL MINING.—The following statement presents a summary of the operations of the anthracite and of the bituminous coal mines in the State during 1906, the coke workers not being included:

ANTHRACITE AND BITUMINOUS COAL-MINE OPERATIONS, 1906.

Items	Anthracite coal	Bituminous coal.
Number of mines in operation	204	1,239
Miners	38,108	111,891
Inside workmen	70,867	22,837
Outside workmen	46,585	15,552
Aggregate wages paid to miners	$24,432,322	$57,128,964
Aggregate wages paid to inside workmen	$31,518,455	$15,341,173
Aggregate wages paid to outside workmen	$20,912,223	$9,729,809
Average days in operation	207	208
Average yearly earnings (all employees)	$494.11	$546.98
Average yearly earnings (miners only)	$641.13	$510.58
Average daily wages (all employees)	$2.39	$2.63
Average daily wages (miners only)	$3.10	$2.45
Number of tons mined and marketed	53,500,520	128,248,331
Market value of product on board cars	$124,307,472	[a] $4,401,984
Market value of product at mines	[b]	[c] $159,220,444
Average tons mined per miner per year	1,404	1,146
Average tons mined per miner per day	6.78	5.08

[a] Value on board cars of 5,751,408 tons. [b] Not reported. [c] Value at mines of 122,493,923 tons.

In addition to the above coal-mining operations there were 33 plants, employing 1,796 persons, engaged in washing anthracite coal from culm banks at the mines. The plants washed 3,744,194 tons of coal, which had a market value of $2,929,076. Wages were paid aggregating $723,484, or an average yearly earning per employee of $402.83. Also there were 46 plants engaged in dredging coal from the Susquehanna and Schuylkill rivers, giving an average employment of 110 days to 194 men, to whom wages amounting to $44,642 were paid. There were 86,373 tons of coal raised, having a market value of $86,327.

Of the 1,239 bituminous coal mines there were 354 from which coal was coked. During the year there were 40,576 coke ovens in service, producing 30,865,481 tons of coke, of a value at plant of $48,970,714. There were 12,330 coke workers, to whom were paid wages amounting to $6,936,913, or an average yearly wage of $562.60.

Returns from 124 anthracite coal companies showed that 4,700 wage-earners owned their homes, that the average annual rental for those paying rent was $73, that the average hours of work per week were 53, and that of the 91,057 employees for whom nationality was reported 26,905 were Americans. There were reported for the industry 541 fatal and 1,723 nonfatal accidents. Returns from 483 bituminous coal companies (that do not coke coal) showed that 6,942 wage-earners owned their homes, that the average annual rental for those paying rent was $63, and that of the 67,274 employees for whom nationality was reported 20,939 were Americans. Returns from 66 bituminous coal companies (that coke coal) showed that 2,356 wage-earners owned their homes, that the average annual rental for those paying rent was $73, that the average hours of work per week were 54, and that of the 34,132 employees for whom nationality was reported 5,664 were Americans. During the year for the bituminous coal industry there were reported 303 fatal and 700 nonfatal accidents.

TEXTILE INDUSTRIES.—Returns made in 1906 by 668 establishments engaged in the textile industries in Philadelphia showed an invested capital of $73,362,158, and for the year a product of the market value of $128,058,603. The establishments were in operation during the year an average of 292 days, employing 66,377 wage-earners (28,041 men, 32,783 women, and 5,553 children), to whom were paid wages amounting to $29,363,863 ($16,346,080 to the men, $11,901,033 to the women, and $1,116,750 to the children). The average yearly earnings per employee in the industry were $442.38– the average for the men being $582.93, for the women $363.02, and for the children $201.11; the average daily wages per employee were $1.52-- the average for the men being $2.00, for the women $1.24, and for the children $0.69. The average value of product per employee was $1,929.26.

VIRGINIA.

Tenth Annual Report of the Bureau of Labor and Industrial Statistics for the State of Virginia. 1907. James B. Doherty, Commissioner. 332 pp.

The subjects presented in this report are industrial statistics, 226 pages; child labor, 91 pages, and labor organizations, 6 pages.

INDUSTRIAL STATISTICS.– A series of tables is given for 41 industries, showing for each industry for 1906 the number of establishments reporting for the year, the value of product, capital invested, amount paid for wages, rent, taxes, and insurance, number of wage-earners by sex and occupation with average daily pay, number and average monthly pay of persons employed on salary, number of hours of work per day and days in operation for each establishment, wage changes, and also totals and averages for each industry. For each industry comparisons with 1905 are presented. Statistics are also given of coal mining, of the operations of 7 gas works, of average daily wages of employees of 40 steam and 22 electric railways, and of accidents on steam and electric roads.

The following table shows for 1905 and 1906, for each of the 21 industries in the State which reported an output in 1906 exceeding $1,000,000, the number of establishments reporting, capital invested, value of product, and aggregate wages paid:

CAPITAL INVESTED, VALUE OF PRODUCT, AND WAGES PAID IN 21 INDUSTRIES, 1905 AND 1906.

Industry.	Establishments.		Capital invested.		Value of product.		Wages paid.	
	1905	1906	1905.	1906.	1905.	1906.	1905	1906.
Boots and shoes	5	6	$583,000	$417,000	$1,520,277	$1,899,574	$263,301	$302,976
Breweries	7	7	2,419,337	2,067,344	1,346,956	1,522,183	168,798	196,072
Brick and tile	56	53	(a)	(a)	1,347,568	1,402,414	(a)	(a)
Carriages, wagons, and buggies	29	35	653,053	992,339	1,504,505	1,565,260	270,652	310,652
Cigars, cigarettes, and cheroots	42	46	967,255	1,206,935	5,527,000	7,445,457	1,022,217	1,265,645
Cotton mills	9	9	7,382,580	8,211,329	4,702,511	5,852,039	974,588	1,091,587
Flour and grist mills	205	197	2,490,348	3,043,826	8,863,711	9,201,414	251,944	304,829
Iron and machine works	48	53	10,790,477	12,129,844	16,714,126	16,869,086	5,644,508	5,402,905
Knitting mills	12	11	362,064	286,233	2,359,965	2,050,275	449,000	432,024
Lime and cement	16	15	1,334,784	1,249,223	1,210,718	1,308,500	377,138	386,581
Overalls and shirts	14	15	239,677	347,341	946,606	1,322,517	170,155	221,407
Paper and pulp mills	9	9	2,998,306	3,174,256	3,310,594	3,356,595	430,223	448,040
Printing, engraving, and bookbinding	81	80	1,217,094	1,294,347	1,834,025	2,102,821	541,167	595,288
Sash, doors, and blinds	22	24	608,835	880,970	1,311,083	1,923,568	279,884	326,578
Sawmills	323	357	(a)	(a)	6,672,903	10,815,839	2,067,407	3,202,763
Silk mills	1	4	726,811	750,923	2,095,661	1,913,000	210,208	182,919
Staves, heads, and cooperage	56	52	711,722	850,374	1,121,925	1,088,410	334,253	276,611
Tanneries	22	22	2,679,901	2,451,160	5,334,423	6,398,064	387,182	443,450
Tobacco factories	30	32	2,212,282	2,561,011	7,226,295	10,133,237	774,176	1,059,308
Trunks and bags	6	7	908,205	1,089,220	1,828,816	2,179,226	222,990	475,150
Woodenware, baskets, boxes, and shooks	19	22	1,660,760	1,845,476	3,388,251	4,200,109	727,157	807,844

a Not reported.

In 1906 there were 229 general contracting firms in the building trades, which reported the value of the work constructed during the year as amounting to $7,852,000, and 108 firms of plumbers, gas fitters, and tinners, which reported the value of work done during the year as amounting to $1,525,410.

The statistics for the 7 gas works show ownership (private or municipal), capacity, private and municipal consumption, price to consumers, etc., and number and daily wages of employees.

The reports on steam and on electric railways operating in the State show for 1906 the average daily wages paid by each road in each occupation and the average daily wages paid by all roads. The following is a summary of the data presented:

AVERAGE DAILY WAGES OF STEAM AND OF ELECTRIC RAILWAY EMPLOYEES, 1906, AND INCREASE IN WAGES OVER 1905.

Steam railroad employees.	Average daily wages.	Increase over 1905.	Electric railway employees.	Average daily wages.	Increase over 1905.
General office clerks	$2.00	$0.08	General office clerks	$1.54	a $0.12
Station agents	1.72	.05	Conductors	1.66	.28
Other station men	1.36	.03	Drivers	1.25	.17
Engineers	4.39	.02	Motormen	1.63	.17
Firemen	2.30	.08	Starters	1.95	.13
Conductors	3.16	.04	Watchmen	1.34	.11
Other train men	1.78	.05	Switchmen	1.22	a .35
Machinists	2.72	.05	Road men	1.35	.36
Carpenters	2.12	.17	Hostlers	1.26	.13
Other shopmen	1.74	.02	Linemen	2.00	.36
Section foremen	1.72	.08	Engineers	2.15	a .02
Other trackmen	1.18	.03	Firemen	1.44	.04
Switchmen, flagmen, and watchmen	1.54	.18	Electricians	2.51	.54
Telegraph operators and dispatchers	2.00	.08	Machinists and mechanics	2.04	.36
Employees, floating equipment	1.46	(b)	Other employees	1.29	.08
Other employees	1.46	.09			

a Decrease.

b No change.

On the steam railroads in Virginia during 1906 there resulted from the movement of trains the accidental killing of 81 employees, 15 passengers, and 119 others, and the injury of 774 employees, 151 passengers, and 212 others; from causes other than the movement of trains there resulted the accidental killing of 3 employees and 1 other person, and the injury of 917 employees and 4 passengers.

In 1906 from 42 mines employing 5,131 persons there were produced 4,254,879 tons of coal, valued at $4,183,991, the mines being in operation an average of 250 days during the year. In 31 mines working 4,294 men the hours of labor were 10 per day, in 5 mines working 727 men the hours of labor were 9 per day, and in the remaining 6 mines (small ones) the hours of labor were 8 per day.

CHILD LABOR.—Under this caption is presented the report of the special agent of the State labor bureau on inspection of factories and investigations touching child labor, and a compilation of the laws of the various States relating to the employment of children.

LABOR ORGANIZATIONS.—This section of the report consists of returns from the various labor organizations of the State, together with recommendations as to legislation and comments on existing conditions. In 29 trades, unions reported an increase of wages during the year, and a decrease in working hours in 10 of the trades. The number of members unemployed during the year amounted to scarcely 1 per cent.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

CANADA.

Report of the Department of Labor of the Dominion of Canada for the year ended June 30, 1906. 127 pp.

The first of the fourteen sections which comprise this report consists of a general review of the material published during the year in the various issues of the Labor Gazette, a monthly devoted to industrial and labor conditions throughout Canada and printed in both English and French.

From a statement relative to the labor-organization movement in Canada, it appears that in 1903 there were 276 unions formed and 54 dissolved, in 1904 there were 152 unions formed and 104 dissolved, and in 1905 there were 103 unions formed and 101 dissolved. In 1905 in the several provinces of the Dominion there were 220 employers' associations.

The section of the report devoted to conciliation and arbitration shows that the intervention of the department of labor, under the Conciliation Act of 1900, was requested in the settlement of labor disputes involving 974 working people on 5 occasions during the year 1905–6, and that since the passage of the act in July, 1900, intervention has been requested on 39 occasions.

During the year the "fair-wages" officers of the department prepared fair-wages schedules for insertion in 147 separate contracts, which were awarded, or were about to be awarded, during the year. Of this number, 41 were in connection with public buildings or works being executed under contract for the department of public works, 95 in connection with contracts or subsidy agreements entered into with the department of railways and canals, 8 for contracts awarded by the department of marine and fisheries, and 3 for insertion in contracts awarded by the commissioners of the Transcontinental Railway. In every case the rates of wages fixed in the fair-wages schedules were based upon what were considered fair rates in the localities in which the work was to be undertaken. Since the establishment of the department of labor, in 1900, the fair-wages officers have prepared some 785 fair-wages schedules for public contract work.

The Annual Report of the Department of Labor for the year ended June 30, 1905, made the following statement in regard to the Railway Labor Disputes Act, which was passed on July 12, 1903:

It was believed that the measure, providing, as it did, the machinery whereby a public inquiry might be made under oath as to the causes underlying any difference between a railway company and any of its employees, with a view to bringing about an adjustment of these differences, the mere existence of the measure would of itself be a means of averting strikes and lockouts on the railways of the Dominion. That the expectation of Parliament in this regard has been thus far realized is well evidenced from the fact that since the passing of the act (now two years ago) there has not been a single strike on any of the railroads of the Dominion of such a nature as to seriously affect transportation.

The present report states that the experience of the past year (1905-6) has only helped to confirm the view expressed in the above statement as to the probable effect of the passing of the Railway Labor Disputes Act, and that the assertion still remains true that since the passing of the act there has not been a single strike on any of the railroads of the Dominion of such a nature as to seriously affect transportation. During the year 1904-5 there was occasion to apply the provisions of the act to a threatened strike of telegraphers on the Grand Trunk Railway, and in that case the act proved effective as a means of preventing the threatened strike.

In the construction of the Grand Trunk Pacific Railway, an industrial undertaking in which the government of Canada is concerned, it became essential in the interests of labor that adequate provision should be made in the acts of Parliament applicable to this particular undertaking, for the protection of the thousands of workmen likely to be employed for six or seven years in connection with the work. As a consequence measures were enacted which require that in the contracts awarded in connection with the construction of this work provision shall be made for the payment of fair wages to the workmen (such wages as are paid for similar labor in the district in which the work is being performed); that there shall be proper medical and sanitary supervision of construction camps; that the sale or improper use of intoxicating liquors about the work shall be forbidden; that there shall be prompt and full payment of all wage claims, etc., and that the contractors shall, as far as possible, use only materials, supplies, etc., manufactured or produced in Canada.

During the fiscal year 1905-6 there were 130 labor disputes in Canada, which involved 13,363 working people directly and 5,150 working people indirectly. The loss of time amounted approximately to 343,800 working days. The disputes affected 501 establishments directly and 36 indirectly. The principal causes of disputes were demands for increase in wages and against the employment of particular persons. Of the 116 disputes which were terminated during the fiscal year, 55 were settled by negotiations between the parties concerned, 27 by the employment of other work people in the places of the strikers, 19 by the resumption of work without negotiations, 5 by conciliation, and the remainder by other methods. There were 48 strikes which resulted in favor of the employers, 37 in favor of the employees, 18 were compromised, 2 were partly successful for the strikers, and the results of the remaining strikes were indefinite or unknown. During the years 1901 to 1905 there were 577 trade disputes in Canada—104 in 1901, 123 in 1902, 160 in 1903, 103 in 1904, and 87 in 1905. Out of the total disputes during the period, the causes of 238 of them related to wages and hours of labor; 283 disputes were settled by negotiations between the parties concerned, and 54 by conciliation or arbitration; 194 disputes resulted in favor of employers, 175 in favor of employees, and 143 were settled by compromise.

There were in Canada during the fiscal year ending June 30, 1906, 1,071 fatal and 2,758 nonfatal industrial accidents. Of fatal accidents the greatest number (219) was in the railway service, and of nonfatal accidents the greatest number (549) was in the metal trades. Mining had 100 fatal and 151 nonfatal accidents, while in lumbering there were 103 fatal and 186 nonfatal accidents.

Accounts are given in two sections of the report of the action of the department of labor in reference to false representations to induce or deter immigration to the Dominion and of the administration of the alien labor laws.

Report of the Royal Commission on a Dispute Respecting Hours of Employment between the Bell Telephone Company of Canada, Ltd., and Operators at Toronto, Ontario. 1907. (Issued by the Department of Labor.) x, 102 pp.

This volume comprises the report of a commission appointed on February 2, 1907, to make inquiry into a dispute between the Bell Telephone Company of Canada and the operators employed in its offices at Toronto, with respect to wages and hours of employment and all matters affecting the merits of the said dispute and the right settlement thereof.

The commission in its inquiry into the causes, nature, and incidents of the strike examined 70 witnesses, and from the evidence obtained and from documents and correspondence submitted were made fully acquainted with the material facts and circumstances relevant to the controversy under consideration.

The cause of the strike of the operators, which commenced on January 31, 1907, was the decision of the telephone company, reached during the month of January, to enforce a new schedule of wages and hours whereby the hours of work were to be increased from 5 to 8 per day, and the manner in which this decision was made known to those whom it concerned.

At a meeting of the strikers, numbering over 400, held on the evening of February 1, a resolution was passed in which the operators requested the minister of labor "to cause a public inquiry to be made under oath into all matters in dispute between them and the said company, agreeing, that in case said inquiry is ordered, to return to the company's employ in order to prevent inconvenience to the public and a general disorganization of business, and to be bound by the finding of said board in all matters between themselves and the said company."

The intention of the Government to have inquiry made into the grievances of the operators, and the appointment of the commission having been announced, the operators, in accordance with the terms of the resolution they had passed, presented themselves for reemployment at the offices of the company on the morning of February 4. A large number were immediately taken on, and the strike, to all intents and purposes, was at an end.

The line of the commission's inquiry embraced the remuneration of work and cost of living, duration and intensity of work, methods of work and elements of nervous strain, opinions of leading physicians, etc.

Before the strike the operators were kept continuously at work at high pressure five hours per day. On January 24 a notice was posted in each of the several exchanges that from and after February 1 the operators would be expected to work eight hours each day, although at a slight increase in salary, but there was no assurance given that there would be any lessening of the pressure under which they would be obliged to work during the hours of employment. Against the proposed change the operators struck.

In the arrangement as finally come to before the commission, the total number of working hours was fixed at 7, spread over a period of 9 hours, divided as follows: 2 hours work, ½ hour relief, 1½ hours work, 1 hour intermission, 2 hours work, ½ hour relief, and 1½ hours work; and, further, the work would be at such a pressure as would be moderate and not too great a tax upon the strength of the operators.

The commission also recommended the strict prohibition of overtime, the granting of a weekly half holiday as in other occupations, the prohibition of 7 days' continuous work (after working 6 days, before entering upon a subsequent day's work, there should be a break of at least 24 hours), the prohibition of young women from entering this class of employment until they have completed their eighteenth year, the examination of operators as to their health (especially as to their nervous system, throat, lungs, sight, hearing, and tendency toward tuberculosis), before being accepted by the company, and the adoption of various measures and devices for the additional comfort and health of the operators.

In conclusion the commission says:

> In our opinion many of the difficulties inevitable to the successful operation of a large telephone exchange might be overcome and harmonious relations between the company and its employees promoted were a permanent board of conciliation established, com-

posed of representatives of the officials of the company and its operators, to which board questions concerning arrangement of hours, reliefs, overtime, discipline, and the like might be referred at stated intervals, an appeal to be had to the head officers of the company where matters in dispute might fail of successful settlement before the board.

GERMANY.

Reiseberichte über Nordamerika erstattet von Kommissaren des Königlich Preuszischen Ministers für Handel und Gewerbe. 1906. 490 pp.

This volume is an account of the results of an investigation made in the year 1904 by a commission sent out by the Prussian ministry of commerce and industry to study the conditions of trade and technical education in the United States. The particular occasion of the undertaking at the time chosen was the opportunity afforded of prosecuting such an investigation in connection with the exhibits made at the international exposition of that year, at St. Louis, though the study was not confined to those exhibits.

The volume consists of a series of reports by various members of the commission covering different phases of the question. The first part is taken up by a somewhat general discussion of (*a*) the intermediate schools in their relation to commerce and industry; (*b*) the public schools and the training of teachers; (*c*) the training of industrial workers. Then follow accounts of the observations made with reference to education in industrial art and drafting, as this was shown in the patterns and products exhibited at St. Louis, the construction of machinery and the working of metals, shipbuilding, the textile industries, and ceramics, and an appendix containing a general discussion of a variety of economic and industrial questions. An article on the production of small tools and machinery of iron and steel is illustrated by 15 full-page plates.

GREAT BRITAIN.

Accidents that have Occurred on the Railways of the United Kingdom during the year 1905. Report to the Secretary to the Board of Trade. 78 pp.

This volume presents a general report on the accidents that have occurred in the working of the railways of the United Kingdom during the year 1905. The accidents are grouped under three main heads, as follows: (1) Train accidents, as collisions, derailments, etc.; (2) accidents caused by the movement of trains and railway vehicles, exclusive of train accidents, and (3) accidents on railway premises not due to train accidents or to the movement of trains and railway vehicles. They are further subdivided in each of the three groups according as they relate to passengers, employees, and other persons.

The following table summarizes the returns, showing by class of accident the number of accidents, fatal and nonfatal, relating to each class of persons:

RAILWAY ACCIDENTS DURING 1905, BY CLASS OF ACCIDENT.

Class of accident.	Passengers.		Employees.		Other persons.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train accidents (as collisions, derailments, etc.)	39	396	6	112	1	8
Accidents caused by the movement of trains and railway vehicles, exclusive of train accidents	109	1,972	393	3,688	551	283
Accidents on railway premises not due to train accidents or to the movement of trains and railway vehicles	18	782	38	10,535	25	460

From the above it will be seen that during the year 1,099 persons (148 passengers, 399 employees, and 552 others) were killed and 6,459 persons (2,368 passengers, 3,800 employees, and 291 others) were injured by accidents due to the running of trains or the movement of railway vehicles. The figures for the previous year (1904) were 1,073 persons killed and 6,889 injured, while the average for the previous nine years was 1,149 persons killed and 6,651 injured.

The 39 passenger fatalities in train accidents during 1905 were largely due to two disasters, in one of which 21 passengers were killed and in the other 10. For the year (exclusive of holders of season tickets) there was 1 passenger killed in each 30,744,156 carried and 1 injured in each 3,027,834 carried. In 1904 (exclusive of holders of season tickets) there was 1 passenger killed in each 199,758,000 carried and 1 injured in each 2,244,472 carried. The number of passengers and other persons (exclusive of railway employees) killed in train accidents in 1905 was 40, as compared with an average of 23 for the previous thirty-one years, while the number injured in 1905 was 404, as compared with an average of 730 for the previous thirty-one years.

Of railway employees (engineers, firemen, guards, and brakemen) in train accidents in 1905, there was 1 killed in each 14,201 employed and 1 injured in each 755 employed. In the thirty-one years previous to 1905 the yearly average of railway employees killed was 14 and the yearly average injured 136.

The number of passengers killed in 1905 in accidents connected with the movement of trains and railway vehicles (exclusive of train accidents) was 109 and the number injured 1,972. In the 25 years previous to 1905 the yearly average of passengers killed was 106, and in the 9 years previous to 1905 the yearly average of passengers injured was 1,589. Excluding season tickets, taking the number of journeys into account, it was found that in 1905 there was 1 passenger killed in every 11,000,202 journeys and 1 injured in every 608,023 journeys, as compared with 1 killed in every 8,394,206 urneys, and 1 injured in every 704,657 journeys, on an average, in the previous periods of 25 and 9 years.

Not including contractors' employees, in this second class of railway accidents in 1905 there were 381 railway employees killed and [illegible],861 injured. The yearly average of railway employees killed in the previous 25 years was 460, and the yearly average injured in the previous 9 years was 3,964. The accidents to persons other than passengers and railway employees who were killed or injured in 1905 were incurred, with few exceptions, either deliberately or through carelessness.

Accidents on railway premises not due to train accidents or to the movement of trains and railway vehicles resulted in the death of 18 passengers, 38 employees, and 25 other persons, and injury to 782 passengers, 10,535 employees, and 460 other persons. These accidents, with few exceptions, were not attributable to railway operation and should not properly be classed as railway accidents.

During 1905, through coming in contact with electric "live" rails, there were 14 accidents to railway employees (1 fatal and 13 nonfatal) and 6 to trespassers (1 fatal and 5 nonfatal).

The total length of the railways of the United Kingdom at the end of 1905 was 22,847 miles; the total track mileage (single track) was 38,431 without sidings and 52,322 with sidings.

Illustrations of Methods of Dust Extraction in Factories and Workshops. Report to the Secretary of State for the Home Department. 1906. 93 pp.

In the United Kingdom during the last decade great improvements have been made, either by voluntary effort or by statutory obligation, in the hygienic conditions of many industrial occupations, more particularly in trades in which injurious dust or fumes are generated.

The present report, by the chief inspector of factories, consists of 58 plates of sketches and plans with descriptive text, collected from various sources, showing methods of extracting dust in different processes in flax, hemp, jute, and tow manufactures, wool-sorting and wool-combing works, metal grinding and polishing, bronzing, etc.; also various systems for humidifying workrooms.

Annual Report of the Chief Inspector of Factories and Workshops, for the Year 1906. Report to the Secretary of State for the Home Department. xvii, 379 pp.

At the end of 1906 there were upon the registers of the factory department 106,337 factories, 6,940 laundries (with and without power), and 141,912 workshops (other than men's workshops), or a total of 255,189 establishments, an increase over 1905 of 3,377 establishments. The works under inspection during 1906 did not include docks, warehouses, buildings, etc., or (in general) domestic workshops. The number of persons employed in factories was (approximately) 4,150,000, in workshops (excluding men's workshops) 700,000, and in laundries, 100,000.

For purposes of inspection the United Kingdom is divided into five inspection districts, each under a superintending inspector, as follows: Southern division, midland division, northeastern division, northwestern division, and the Scotland and Ireland division. The report of each supervising inspector comprises for his district an account of the organization of the working staff and the scope of the work of inspection; complaints from officials, operatives, and others respecting sanitation, safety measures, hours of labor, illegal employment, etc.; industrial developments and state of trade in the district; sanitary conditions and improvements; industrial accidents; safety devices, their efficiency and defects, etc.; industrial poisoning (anthrax, arsenic, mercury, and lead poisoning, etc.); dangerous trades; employment and hours of labor, especially relating to children and women; to holidays, overtime, half time, night work, and meal times; the employment of children as half-timers and of those not exempt from school; action of the local sanitary authorities in connection with the factory department; administration of the law relating to particulars for piecework; operation of the truck acts; prosecutions for violations of the factory laws; inquest notices, etc. In addition, there are reports from the superintending inspector for dangerous trades, the principal lady inspector, the inspector of textile particulars, the electrical inspector, and the medical inspector. Tables presenting in detail and in summary form statistics pertaining to the various features of factory and workshop employment accompany the inspection reports.

The establishments added to the registers of the factory department during 1906 numbered 27,144 (417 textile and 7,405 nontextile factories, 372 laundries with power and 513 without power, and 18,437 workshops, other than men's workshops), while those of the different classes removed from the registers numbered 23,767, resulting in a net gain in the establishments added of 1.3 per cent.

The number of persons (children, young persons, and adults) employed in textile factories during 1904, together with comparative total figures for 1901, are given in the following table:

PERSONS EMPLOYED IN TEXTILE FACTORIES IN 1904 AND IN 1901.

Class of employees.	Number employed.		Total for United Kingdom.	Percentage of whole number employed.	
	Males.	Females		Males.	Females.
Children (half-timers under 14)	14,568	17,176	31,744	1.4	1.7
Young persons (full-timers under 18)	70,965	137,038	208,003	6.9	13.3
Adults	297,302	489,329	786,631	29.0	47.7
Total for 1904	382,835	643,543	1,026,378	37.3	62.7
Total for 1901	379,211	650,142	1,029,353	36.8	63.2

Of the total 1,026,378 persons employed in 1904 in the textile factories of the United Kingdom, 822,451 were employed in England and Wales, 133,035 in Scotland, and 70,892 in Ireland; of the total 1,029,353 employed in 1901 in the textile factories, 821,267 were employed in England and Wales, 137,948 in Scotland, and 70,138 in Ireland.

In the table following, the number of persons (children, young persons, and adults) employed in textile factories in 1904 is shown by kind of textile manufactured:

PERSONS EMPLOYED IN TEXTILE FACTORIES IN 1904, BY KIND OF TEXTILE MANUFACTURED.

Kind of textile manufactured	Children (half-timers under 14)		Young persons (full-timers under 18)		Adults		Total for United Kingdom.
	Males	Females	Males	Females	Males.	Females	
Cotton	8,131	9,520	37,338	71,975	150,952	245,114	523,030
Wool, worsted, and shoddy	4,230	4,382	19,014	32,238	85,754	116,183	261,801
Silk	205	480	1,484	4,747	6,902	16,093	29,911
Lace	45	31	1,536	2,074	9,498	5,404	18,588
Hosiery	14	49	1,209	6,724	7,894	20,446	36,336
Flax	1,550	2,243	6,038	12,353	20,669	53,026	95,879
Hemp	37	31	1,210	1,311	2,730	5,509	10,831
Jute	338	435	2,611	4,419	9,650	23,805	41,258
Horsehair, elastic, etc	18	2	525	1,197	3,253	3,749	8,744
Total	14,568	17,176	70,965	137,038	297,302	489,329	1,026,378

The table following shows the number of children and young persons examined during 1906 for certificates of fitness for employment in factories, together with the number of those who were certified by the examining surgeons and the number of those who were rejected. The children and young persons are grouped in three classes—children under 14 years of age intended to be employed half time, young persons between the ages of 13 and 14 years intended to be employed full time, and young persons between 14 and 16 years of age to be employed full time.

MEDICAL EXAMINATIONS OF CHILDREN AND YOUNG PERSONS, 1906.

Class of persons.	Total examined	Certified.			Rejected.		
		Males.	Females	Total	Males.	Females.	Total.
Children under 14	42,613	20,790	21,259	42,049	234	330	564
Young persons between 13 and 14	80,579	40,631	38,527	79,158	608	813	1,421
Young persons between 14 and 16	267,677	139,722	124,486	264,208	1,583	1,886	3,469
Total for United Kingdom	390,869	201,143	184,272	385,415	2,425	3,029	5,454

During the year there were also 181,497 medical examinations under regulations and special rules—131,293 of males and 50,204 of females. Under the Factory and Workshop Act power is likewise conferred on certifying surgeons to attach conditions of employment to certificates of fitness. This power was exercised with advantage in some 800 instances.

During 1906 there were 111,904 industrial accidents reported, 76,208 being reported to inspectors only, and 35,696 to certifying surgeons. Those reported to inspectors only were nonfatal in result and of a minor character. In the table following the accidents reported to certifying surgeons are shown by degree of injury (fatal and nonfatal) and by sex and age:

ACCIDENTS REPORTED TO CERTIFYING SURGEONS, 1906.

Sex and age of persons injured.	Fatal accidents.	Increase over 1905.	Nonfatal accidents.	Increase over 1905.	Total accidents.	Increase over 1905.
Males	1,098	62	30,381	3,239	31,479	3,301
Females	18	[a]9	4,199	402	4,217	393
Total	1,116	53	34,580	3,641	35,696	3,694
Adults (over 18)	1,011	57	27,313	3,279	28,324	3,336
Young persons (13 to 18)	104	[a]3	7,116	341	7,220	338
Children (12 to 14)	1	[a]1	151	21	152	20

[a] Decrease.

In the textile industries there were 5,172 accidents (68 fatal and 5,104 nonfatal), in the nontextile industries 27,730 accidents (731 fatal and 26,999 nonfatal), and in other lines of industry (docks, warehouses, building construction, etc.) 2,794 accidents (317 fatal and 2,477 nonfatal). In the textile industries the greatest number of accidents was in cotton spinning and weaving, with 37 fatal and 2,958 nonfatal accidents, followed by wool, worsted, and shoddy, with 15 fatal and 1,202 nonfatal accidents; in the nontextile industries the greatest number of accidents was in shipbuilding, machines and machinery, and the metal trades, with 424 fatal and 16,920 nonfatal accidents.

The cases of industrial poisoning reported in 1906 numbered 708, of which 55 resulted fatally. Of the total, 678 were cases affecting adults (of which 52 were fatal) and 30 were cases affecting young persons and children (of which 3 were fatal). There were 632 cases of lead poisoning (of which 33 were fatal), 4 cases of mercury poisoning, 5 cases of arsenic poisoning, and 67 cases of anthrax (of which 22 were fatal).

The report of the superintending inspector for dangerous trades shows that during 1906 there were in the United Kingdom, where particular dangers arise and special precautions are necessary, 15,466 industrial establishments operating under special rules and regulations.

Generally, the employment of children as half-timers is becoming less frequent, though in certain towns the numbers have increased, chiefly owing to the raising of the age at which full-time employment is allowed by the local authorities.

Safeguards for the Prevention of Accidents in the Manufacture of Cotton. Report to the Secretary of State for the Home Department. 1906. 22 pp. and 28 plates.

The present report on the prevention of accidents in the spinning and weaving of cotton is based upon the requirements of the Factory Act of 1901, and upon the results disclosed by the statistics of accidents which have been compiled annually since the publication of a similar report in 1899. The report is made by the superintending inspector of factories for the northwestern division, which embraces over 80 per cent of the cotton industry throughout the United Kingdom.

There are set forth in the report the regulations of the Factory Act of 1901 pertaining to the fencing of dangerous machinery, to steam boilers, to self-acting machines, to cleaning machinery in motion, to fire escapes and doors, to dangerous ways, etc.; also general recommendations are added as to the safeguarding of machinery and to hoists and doors. Descriptions of the machines used in the various processes of spinning and weaving cotton are given, together with descriptions of the requisite guards that should be provided for their safe operation. Accompanying the text are 28 plates showing guards for machinery which, in almost every instance, are now in actual use in cotton manufacture.

In the northwestern division during the years 1900 to 1905 there were 13,633 cotton-machinery accidents—2,389 in 1900, 2,442 in 1901, 2,394 in 1902, 2,098 in 1903, 1,960 in 1904, and 2,350 in 1905. The machines in connection with the operation of which the greatest number of accidents occurred were carding engines (with 1,334 accidents), speed frames (with 1,588 accidents), self-acting mules (with 4,183 accidents), and looms (with 2,818 accidents).

NEW SOUTH WALES.

Tenth Annual Report of the Department of Labor and Industry, for the year ended December 31, 1906. iv, 50 pp.

This annual return, made to the minister of public instruction and labor and industry, consists of a report on the working of the Factories and Shops Act, Early Closing Acts, Shearers' Accommodation Act, etc., during the year 1906.

For purposes of inspection of factories and shops the State is divided into four districts—the Metropolitan, Newcastle, Broken Hill, and Hartley. At the close of 1906 there were on the registers of the department 3,419 factories in the four districts, employing a total of 61,321 working people (42,179 males and 19,142 females). The factories are grouped under 19 industrial classes, showing for each class number of working people employed, kind of power (steam, gas, or electricity) used, etc.

The table following shows by sex and age periods the number of working people employed in the registered factories of each district during 1906, together with the number of factories located in each district:

NUMBER OF WORKING PEOPLE EMPLOYED IN REGISTERED FACTORIES DURING 1906, BY SEX AND AGE PERIODS.

Inspection district	Registered factories	Employees under 16 years of age.		Employees 16 to 18 years of age.		Employees over 18 years of age		Total employees.
		Males	Females	Males.	Females	Males	Females.	
Metropolitan	2,790	2,017	1,831	4,040	3,704	30,143	11,996	53,791
Newcastle	483	256	236	426	360	3,090	675	5,043
Broken Hill	83	42	29	42	44	492	149	798
Hartley	63	61	12	84	14	1,486	32	1,689
Total	3,419	2,376	2,108	4,592	4,122	35,211	12,852	61,321

In the table below is shown the number of registered factories in the four districts and the number of working people (males and females) employed in the factories for the period 1901 to 1906:

NUMBER OF REGISTERED FACTORIES AND WORKING PEOPLE EMPLOYED FOR THE PERIOD 1901 TO 1906.

Year	Registered factories.	Working people employed.		
		Males.	Females.	Total.
1901	2,595	34,651	12,008	46,659
1902	2,800	34,479	13,425	47,904
1903	2,907	34,198	14,660	48,858
1904	3,186	35,602	16,088	51,690
1905	3,277	38,623	17,082	55,705
1906	3,419	42,179	19,142	61,321

During 1906 there were issued to children (persons under the age of 14 years) 2,775 certificates of fitness and permits to work in factories (2,033 to males and 742 to females); special permits, granting exemption from attending day school in order to work in factories, were issued to 315 children (232 to males and 83 to females).

The number of accidents in factories reported for the year was 276, of which but 1 was fatal. While the necessity for the strictest supervision over the fencing and guarding of machinery still exists, the majority of factory proprietors are reasonable in complying with orders in this respect.

From the reports of the inspectors under the Early Closing Acts it is believed that a large majority of shopkeepers now willingly comply with the provisions of the acts; but some trouble is still experienced with the second-hand dealers and shopkeepers who carry the stock in trade of both a schedule and a nonschedule shop.

The requirements of the Shearers' Accommodation Act have, at most stations, been complied with by station owners and managers in a reasonable manner, and, although some complaints have been received, there is no doubt that the accommodation throughout the State is in a much more satisfactory condition than at any time since the act came into operation. During the year 105 new huts were erected and additions and improvements made to many others that did not in all respects fulfill the requirements.

During 1906 there were 42 prosecutions for breaches of the Factories and Shops Act, resulting in 31 convictions, 8 cases being withdrawn and 3 cases being dismissed. Under the Early Closing Acts there were 265 prosecutions, resulting in 217 convictions, 29 cases being withdrawn and 19 cases being dismissed.

WESTERN AUSTRALIA.

Report of the Royal Commission on the Ventilation and Sanitation of Mines. Department of Mines, 1905. 500 pp.

This inquiry, made by a royal commission in 1904-5, the report of which was submitted to the governor of Western Australia on February 25, 1905, relates to the conditions of the ventilation and sanitation of the mines of Western Australia, the effects of the said conditions on the health of the persons employed in the mines, and the measures which should be taken, when necessary, to bring about improvement thereof.

There were 172 sittings of the commission, and visits were made to the principal mining centers of the State, which were easily accessible. Evidence was taken from 192 witnesses, which included mining engineers, managers, and inspectors; under managers, shiftbosses, and mining contractors; miners; metallurgists and representatives of explosives companies; officials of miners' and workers' associations, etc. The examination ranged over a wide field of varied mining experience in the endeavor to collect all possible information that would be of service to the commission. Every phase of the subject of ventilation and sanitation was practically and exhaustively considered, together with the related subjects of dust in mines and mills, gases due to explosives, fumes from the cyanide process and other dangerous fumes, health of miners, etc.

The conclusion of the report of the commission on the measures to be taken for improving the ventilation and sanitation of mines resulted in suggested legislation providing that The Mines Regulation Act, 1895, should be amended so as to include provisions for carrying into effect the recommendations made by the commission. Further, the commission expressed the opinion that the sanitary regulations suggested should apply to coal as well as to metalliferous mines, and that they should be made under The Coal Mines Regulation Act, 1902, as well as under The Mines Regulation Act, 1895.

The suggested legislation relates to (1) ventilation of mines, (2) prevention of dust, (3) use of explosives, (4) connections between levels and adjoining mines, and (5) sanitary conditions.

DECISIONS OF COURTS AFFECTING LABOR.

[Except in cases of special interest, the decisions here presented are restricted to those rendered by the Federal courts and the higher courts of the States and Territories. Only material portions of such decisions are reproduced, introductory and explanatory matter being given in the words of the editor. Decisions under statute law are indexed under the proper headings in the cumulative index, page 657 et seq]

DECISIONS UNDER STATUTE LAW.

BOYCOTTS—COMBINATIONS IN RESTRAINT OF INTERSTATE COMMERCE—ANTITRUST LAW—*Loewe v. Lawlor, United States Supreme Court, 28 Supreme Court Reporter, page 301.*—Lawlor and his associates were members of a local branch of the United Hatters of North America, which organization had undertaken to procure the unionizing of the factory of the complainants. The complaint filed is given in full in the margin of the report of the opinion; but since the essential parts are summarized or reproduced in the opinion itself, no preliminary statement thereof is necessary.

The case was brought in the United States circuit court for the district of Connecticut, in which it was held that the facts did not bring the case within the provisions of the antitrust act, and it was dismissed on demurrer to the complaint. (148 Fed. Rep., 924. See Bulletin No. 70, p. 710. See also 142 Fed. Rep., 216; 130 Fed. Rep., 633.) An injunction was secured by Loewe against the California State Federation of Labor. (139 Fed. Rep., 71. See Bulletin No. 61, p. 1067.) Appeal was taken to the circuit court of appeals for the second circuit, which certified to the Supreme Court the question as to the applicability of the act in question. Afterward, by mutual agreement, the entire case was transferred to the Supreme Court, which held that the case fell within the provisions of the antitrust act, being a combination in restraint of trade, and remanded the case for a new trial. The opinion of the court was delivered by Chief Justice Fuller, and is in the main as follows:

> The question is whether upon the facts therein averred [i. e., in the complaint] and admitted by the demurrer this action can be maintained under the antitrust act.
>
> The first, second and seventh sections of that act are as follows:
>
> 1. "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal. Every person who shall make any such contract or engage in any such combination or conspiracy, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine not exceeding five thousand dollars, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

2. "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States or with foreign nations, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine not exceeding five thousand dollars, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

7. "Any person who shall be injured in his business or property by any other person or corporation by reason of anything forbidden or declared to be unlawful by this act, may sue therefor in any circuit court of the United States in the district in which the defendant resides or is found, without respect to the amount in controversy, and shall recover threefold the damages by him sustained, and the costs of suit, including a reasonable attorney's fee."

In our opinion, the combination described in the declaration is a combination "in restraint of trade or commerce among the several States," in the sense in which those words are used in the act, and the action can be maintained accordingly.

And that conclusion rests on many judgments of this court, to the effect that the act prohibits any combination whatever to secure action which essentially obstructs the free flow of commerce between the States, or restricts, in that regard, the liberty of a trader to engage in business.

The combination charged falls within the class of restraints of trade aimed at compelling third parties and strangers involuntarily not to engage in the course of trade except on conditions that the combination imposes; and there is no doubt that (to quote from the well-known work of Chief Justice Erle on Trade Unions) "at common law every person has individually, and the public also has collectively, a right to require that the course of trade should be kept free from unreasonable obstruction." But the objection here is to the jurisdiction, because, even conceding that the declaration states a case good at common law, it is contended that it does not state one within the statute. Thus, it is said, that the restraint alleged would operate to entirely destroy defendants' business and thereby include intrastate trade as well; that physical obstruction is not alleged as contemplated; and that defendants are not themselves engaged in interstate trade.

We think none of these objections are tenable, and that they are disposed of by previous decisions of this court.

United States *v.* Trans-Missouri Freight Association, 166 U. S. 290; United States *v.* Joint Traffic Association, 171 U. S. 505; and Northern Securities Company *v.* United States, 193 U. S. 197, hold in effect that the antitrust law has a broader application than the prohibition of restraints of trade unlawful at common law. Thus in the Trans-Missouri case it was said that, "assuming that agreements of this nature are not void at common law, and that the various cases cited by the learned courts below show it, the answer to the statement of their validity is to be found in the terms of the statute under consideration;" and in the Northern Securities case that "the act declares illegal every contract, combination or conspiracy in whatever form, of whatever nature, and whoever may be the parties to it, which directly or necessarily operates in restraint of trade or commerce among the several States."

We do not pause to comment on cases such as United States *v.* Knight, 156 U. S. 1; Hopkins *v.* United States, 171 U. S. 578; and Anderson *v.* United States, Id. 604; in which the undisputed facts showed that the purpose of the agreement was not to obstruct or restrain interstate commerce. The object and intention of the combination determined its legality.

In Swift *v.* United States, 196 U. S. 395, a bill was brought against a number of corporations, firms and individuals of different States, alleging that they were engaged in interstate commerce in the purchase, sale, transportation and delivery, and subsequent resale at the point of delivery, of meats; and that they combined to refrain from bidding against each other in the purchase of cattle; to maintain a uniform price at which the meat should be sold; and to maintain uniform charges in delivering meats thus sold through the channels of interstate trade to the various dealers and consumers in other States. And that thus they artificially restrained commerce in fresh meats from the purchase and shipment of live stock from the plains to the final distribution of the meats to the consumers in the markets of the country.

Mr. Justice Holmes, speaking for the court, said:

"Commerce among the States is not a technical legal conception, but a practical one, drawn from the course of business. When cattle are sent for sale from a place in one State with the expectation that they will end their transit after purchase in another, and when in effect they do so, with only the interruption necessary to find a purchaser at the stock yards, and when this is a typical, constantly recurring course, the current thus existing is a current of commerce among the States, and the purchase of the cattle is a part and incident of such commerce.

* * * * * * *

"The general objection is urged that the bill does not set forth sufficient definite or specific facts. This objection is serious, but it seems to us inherent in the nature of the case. The scheme alleged is so vast that it presents a new problem in pleading. If, as we must assume, the scheme is entertained, it is, of course, contrary to the very words of the statute. Its size makes the violation of the law more conspicuous, and yet the same thing makes it impossible to fasten the principal fact to a certain time and place. The elements, too, are so numerous and shifting, even the constituent parts alleged are and from their nature must be so extensive in time and space, that something of the same impossibility applies to them.

* * * * * * *

"The scheme as a whole seems to us to be within reach of the law. The constituent elements, as we have stated them, are enough to give to the scheme a body and, for all that we can say, to accomplish it. Moreover, whatever we may think of them separately, when we take them up as distinct charges, they are alleged sufficiently as elements of a scheme. It is suggested that the several acts charged are lawful and that intent can make no difference. But they are bound together as parts of a single plan. The plan may make the parts unlawful."

And the same principle was expressed in Aikens *v.* Wisconsin, 195 U. S. 194 [Bulletin No. 57, p. 678], involving a statute of Wisconsin prohibiting combinations "for the purpose of willfully or maliciously injuring another in his reputation, trade, business or profession by any means whatever," in which Mr. Justice Holmes said:

"The statute is directed against a series of acts, and acts of several, the acts of combining, with intent to do other acts. 'The very plot is an act in itself.' Mulcahy v. The Queen, L. R. 3 H. L. 306, 317. But an act, which in itself is merely a voluntary muscular contraction, derives all its character from the consequences which will follow it under the circumstances in which it was done. When the acts consist of making a combination calculated to cause temporal damage, the power to punish such acts, when done maliciously, can not be denied because they are to be followed and worked out by conduct which might have been lawful if not preceded by the acts. No conduct has such an absolute privilege as to justify all possible schemes of which it may be a part. The most innocent and constitutionally protected of acts or omissions may be made a step in a criminal plot, and if it is a step in a plot neither its innocence nor the Constitution is sufficient to prevent the punishment of the plot by law."

In Addyston Pipe and Steel Company v. United States, 175 U. S. 211, the petition alleged that the defendants were practically the only manufacturers of cast iron within thirty-six States and Territories, that they had entered into a combination by which they agreed not to compete with each other in the sale of pipe, and the territory through which the constituent companies could make sales was allotted between them. This court held that the agreement which, prior to any act of transportation, limited the prices at which the pipe could be sold after transportation, was within the law. Mr. Justice Peckham, delivering the opinion, said: "And when Congress has enacted a statute such as the one in question, any agreement or combination which directly operates not alone upon the manufacture but upon the sale, transportation and delivery of an article of interstate commerce, by preventing or restricting its sale, etc., thereby regulates interstate commerce."

In Montague & Company v. Lowry, 193 U. S. 38, which was an action brought by a private citizen under section 7 against a combination engaged in the manufacture of tiles, defendants were wholesale dealers in tiles in California and combined with manufacturers in other States to restrain the interstate traffic in tiles by refusing to sell any tiles to any wholesale dealer in California who was not a member of the association except at a prohibitive rate. The case was a commercial boycott against such dealers in California as would not or could not obtain membership in the association. The restraint did not consist in a physical obstruction of interstate commerce, but in the fact that the plaintiff and other independent dealers could not purchase their tiles from manufacturers in other States because such manufacturers had combined to boycott them. This court held that this obstruction to the purchase of tiles, a fact antecedent to physical transportation, was within the prohibition of the act. Mr. Justice Peckham, speaking for the court, said, concerning the agreement, that it "restrained trade, for it narrowed the market for the sale of tiles in California from the manufacturers and dealers therein in other States, so that they could only be sold to the members of the association, and it enhanced prices to the nonmember."

The averments here are that there was an existing interstate traffic between plaintiffs and citizens of other States, and that for the direct purpose of destroying such interstate traffic defendants combined not merely to prevent plaintiffs from manufacturing articles then and there intended for transportation beyond the State, but also to prevent the vendees from reselling the hats which they had imported from Connecticut, or from further negotiating with plaintiffs for the purchase and intertransportation of such hats from Connecticut to the various places of destination. So that, although some of the means whereby the interstate traffic was to be destroyed were acts within a State, and some of them were in themselves as a part of their obvious purpose and effect beyond the scope of Federal authority, still, as we have seen, the acts must be considered as a whole, and the plan is open to condemnation, notwithstanding a negligible amount of intrastate business might be affected in carrying it out. If the purposes of the combination were, as alleged, to prevent any interstate transportation at all, the fact that the means operated at one end before physical transportation commenced and at the other end after the physical transportation ended was immaterial.

Nor can the act in question be held inapplicable because defendants were not themselves engaged in interstate commerce. The act made no distinction between classes. It provided that "every" contract, combination or conspiracy in restraint of trade was illegal. The records of Congress show that several efforts were made to exempt, by legislation, organizations of farmers and laborers from the operation of the act and that all these efforts failed, so that the act remained as we have it before us.

In an early case, United States *v.* Workingmen's Amalgamated Council, 54 Fed. Rep. 994, the United States filed a bill under the Sherman Act in the circuit court for the eastern district of Louisiana, averring the existence of "a gigantic and widespread combination of the members of a multitude of separate organizations for the purpose of restraining the commerce among the several States and with foreign countries," and it was contended that the statute did not refer to combinations of laborers. But the court, granting the injunction, said:

"I think the Congressional debates show that the statute had its origin in the evils of massed capital; but, when the Congress came to formulating the prohibition, which is the yardstick for measuring the complainant's right to the injunction, it expressed it in these words: 'Every contract or combination in the form of trust, or otherwise in restraint of trade or commerce among the several States or with foreign nations, is hereby declared to be illegal.' The subject had so broadened in the minds of the legislators that the source of the evil was not regarded as material, and the evil in its entirety is dealt with. They made the interdiction include combinations of labor, as well as of capital; in fact, all combinations in restraint of commerce, without reference to the character of the persons who entered into them. It is true this statute has not been much expounded by judges, but, as it seems to me, its meaning, as far as relates to the sort of combinations to which it is to apply, is manifest, and that it includes combinations which are composed of laborers acting in the interest of laborers."

* * * * * * *

"It is the successful effort of the combination of the defendants to intimidate and overawe others who were at work in conducting or carrying on the commerce of the country, in which the court finds their error and their violation of the statute. One of the intended results of their combined action was the forced stagnation of all the commerce which flowed through New Orleans. This intent and combined action are none the less unlawful because they included in their scope the paralysis of all other business within the city as well."

The case was affirmed on appeal by the circuit court of appeals for the fifth circuit. (57 Fed. Rep. 85.)

Subsequently came the litigation over the Pullman strike and the decisions In re Debs, 64 Fed. Rep. 724, 745, 755; 158 U. S. 564. The bill in that case was filed by the United States against the officers of the American Railway Union, which alleged that a labor dispute existed between the Pullman Palace Car Company and its employees; that thereafter the four officers of the railway union combined together and with others to compel an adjustment of such dispute by creating a boycott against the cars of the car company; that to make such boycott effective they had already prevented certain of the railroads running out of Chicago from operating their trains; that they asserted that they could and would tie up, paralyze and break down any and every railroad which did not accede to their demands, and that the purpose and intention of the combination was "to secure unto themselves the entire control of the interstate, industrial and commercial business in which the population of the city of Chicago and of other communities along the lines of road of said railways are engaged with each other, and to restrain any and all other persons from any independent control or management of such interstate, industrial or commercial enterprises, save according to the will and with the consent of the defendants."

The circuit court proceeded principally upon the Sherman anti-trust law, and granted an injunction. In this court the case was rested upon the broader ground that the Federal Government had full power over interstate commerce and over the transmission of the mails, and in the exercise of those powers could remove everything put upon highways, natural or artificial, to obstruct the passage of interstate commerce, or the carrying of the mails. But in reference to the antitrust act the court expressly stated:

"We enter into no examination of the act of July 2, 1890, c. 647, 26 Stat. 209, upon which the circuit court relied mainly to sustain its jurisdiction. It must not be understood from this that we dissent from the conclusions of that court in reference to the scope of the act, but simply that we prefer to rest our judgment on the broader ground which has been discussed in this opinion, believing it of importance that the principles underlying it should be fully stated and affirmed."

And in the opinion Mr. Justice Brewer, among other things, said:

"It is curious to note the fact that in a large proportion of the cases in respect to interstate commerce brought to this court the question presented was of the validity of State legislation in its bearings upon interstate commerce, and the uniform course of decision has been to declare that it is not within the competency of a State to legislate in such a manner as to obstruct interstate commerce. If a State, with its recognized powers of sovereignty, is impotent to obstruct interstate commerce, can it be that any mere voluntary association of individuals within the limits of that State has a power which the State itself does not possess?"

The question answers itself, and in the light of the authorities the only inquiry is as to the sufficiency of the averments of fact. We have given the declaration in full in the margin, and it appears therefrom that it is charged that defendants formed a combination to directly restrain plaintiffs' trade; that the trade to be restrained was interstate; that certain means to attain such restraint were contrived to be used and employed to that end; that those means were so used and employed by defendants, and that thereby they injured plaintiffs' property and business.

At the risk of tediousness, we repeat that the complaint averred that plaintiffs were manufacturers of hats in Danbury, Connecticut, having a factory there, and were then and there engaged in an interstate trade in some twenty States other than the State of Connecticut; that they were practically dependent upon such interstate trade to consume the product of their factory, only a small percentage of their entire output being consumed in the State of Connecticut; that at the time the alleged combination was formed they were in the process of manufacturing a large number of hats for the purpose of fulfilling engagements then actually made with consignees and wholesale dealers in States other than Connecticut, and that if prevented from carrying on the work of manufacturing these hats they would be unable to complete their engagements.

That defendants were members of a vast combination called the United Hatters of North America, comprising about 9,000 members and including a large number of subordinate unions, and that they were combined with some 1,400,000 others into another association known as the American Federation of Labor, of which they were members, whose members resided in all the places in the several States where the wholesale dealers in hats and their customers resided and did business; that defendants were "engaged in a combined scheme and effort to force all manufacturers of fur hats in the United States, including the plaintiffs, against their will and their previous policy of carrying on their business, to organize their workmen in the departments of making and finishing, in each of their factories, into an organization, to be part and parcel of the said combination known as the United Hatters of North America, or as the defendants and their confederates term it, to unionize their shops, with the intent thereby to control the employment of labor in and the operation of said factories, and to subject the same to the direction and control of persons other than the owners of the same, in a manner extremely onerous and distasteful to such owners, and to carry out such scheme, effort and purpose, by restraining and destroying the interstate trade and commerce of such manufacturers, by means of intimidation of and threats made to such manufacturers and their customers in the several States, of boycotting them, their product and their customers, using therefor all the powerful means at their command as aforesaid, until such time as, from the damage and loss of business resulting therefrom, the said manufacturers should yield to the said demand to unionize their factories."

That the conspiracy or combination was so far progressed that out of eighty-two manufacturers of this country engaged in the production of fur hats seventy had accepted the terms and acceded to the demand that the shop should be conducted in accordance, so far as conditions of employment were concerned, with the will of the American Federation of Labor; that the local union demanded of plaintiffs that they should unionize their shop under peril of being boycotted by this combination, which demand defendants declined to comply with; that thereupon the American Federation of Labor, acting through its official organ and through its organizers, declared a boycott.

The complaint then thus continued:

"20. On or about July 25, 1902, the defendants, individually and collectively, and as members of said combinations and associations, and with other persons whose names are unknown to the plaintiffs, associated with them, in pursuance of the general scheme and purpose aforesaid, to force all manufacturers of fur hats, and particularly the plaintiffs, to so unionize their factories, wantonly, wrongfully, maliciously, unlawfully and in violation of the provisions of the 'act of Congress, approved July 2, 1890,' and entitled 'An act to protect trade and commerce against unlawful restraints and monopolies,' and with intent to injure the property and business of the plaintiffs by means of acts done which are forbidden and declared to be unlawful, by said act of Congress, entered into a combination and conspiracy to restrain the plaintiffs and their customers in States other than Connecticut in carrying on said trade and commerce among the several States and to wholly prevent them from engaging in and carrying on said trade and commerce between them and to prevent the plaintiffs from selling their hats to wholesale dealers and purchasers in said States other than Connecticut, and to prevent said dealers and customers in said other States from buying the same, and to prevent the plaintiffs from obtaining orders for their hats from such customers, and filling the same, and shipping said hats to said customers in said States as aforesaid, and thereby injure the plaintiffs in their property and business and to render unsalable the product and output of their said factory, so the subject of interstate commerce, in whosoever's hands the same might be or come, through said interstate trade and commerce, and to employ as means to carry out said combination and conspiracy and the purposes thereof, and accomplish the same, the following measures and acts, viz:

"To cause, by means of threats and coercion, and without warning or information to the plaintiffs, the concerted and simultaneous withdrawal of all the makers and finishers of hats then working for them, who were not members of their said combination, The United Hatters of North America, as well as those who were such members, and thereby cripple the operation of the plaintiffs' factory, and prevent the plaintiffs from filling a large number of orders then on hand, from such wholesale dealers in States other than Connecticut, which they had engaged to fill and were then in the act of filling, as was well known to the defendants; in connection therewith to declare a boycott against all hats made for sale and sold and delivered, or to be so sold or delivered, by the plaintiffs to said wholesale dealers in States other than Connecticut, and to actively boycott the same and the business of those who should deal in them, and thereby prevent the sale of the same by those in whose hands they might be or come through said interstate trade in said several States; to procure and cause others of said combinations united with them in said American Federation of Labor, in like manner to declare a boycott against and to actively boycott the same and the business of such wholesale dealers as should buy or sell them, and of those who should purchase them from such wholesale dealers; to intimidate such wholesale dealers from purchasing or dealing in the hats of the plaintiffs by informing them that the American Federation of Labor had declared a boycott against the product of the plaintiffs and against any dealer who should handle it, and that the same was to be actively pressed against them, and by distributing circulars containing notices that such dealers and their customers were to be boycotted; to threaten with a boycott those customers who should buy any goods whatever, even though union made, of such boycotted dealers, and at the same time to notify such wholesale dealers that they were at liberty to deal in the hats of any other nonunion manufacturer of similar quality to those made by the plaintiffs, but must not deal in the hats made by the plaintiffs under threats of such boycotting; to falsely represent to said wholesale dealers and their customers, that the plaintiffs had discriminated against the union men in their employ, had thrown them out of employment because they refused to give up their union cards and teach boys, who were intended to take their places after seven months' instruction, and had driven their employees to extreme measures 'by their persistent, unfair and un-American policy of antagonizing union labor, forcing wages to a starvation scale, and given boys and cheap, unskilled foreign labor preference over experienced and capable union workmen,' in order to intimidate said dealers from purchasing said hats by reason of the prejudice thereby created against the plaintiffs and the hats made by them among those who might otherwise purchase them; to use the said union label of said The United Hatters of North America as an instrument to aid them in carrying out said conspiracy and combination against the plaintiffs' and their customers' intertrade aforesaid, and in connection with the boycotting above mentioned, for the purpose of describing and identifying the hats of the plaintiffs and singling them out to be so boycotted; to employ a large number of agents to visit said wholesale dealers and their customers, at their several places of business, and threaten them with loss of business if they should buy or handle the hats of the plaintiffs, and thereby prevent them from buying said hats, and in connection therewith to cause said dealers to be waited upon by committees representing large combinations of persons in their several localities to make similar threats to them; to use the daily press in the localities where such wholesale dealers reside, and do business, to announce and advertise the said boycotts against the hats of the plaintiffs and said wholesale dealers, and thereby make the same more effective and oppressive, and to use the columns of their said paper, The Journal of the United Hatters of North America, for that purpose, and to describe the acts of their said agents in prosecuting the same."

And then followed the averments that the defendants proceeded to carry out their combination to restrain and destroy interstate trade and commerce between plaintiffs and their customers in other States by employing the identical means contrived for that purpose; and that by reason of those acts plaintiffs were damaged in their business and property in some $80,000.

We think a case within the statute was set up and that the demurrer should have been overruled.

Judgment reversed and cause remanded with a direction to proceed accordingly.

HOURS OF LABOR OF FEMALE EMPLOYEES—POLICE POWER—CONSTITUTIONALITY OF STATUTE—*Muller v. State, United States Supreme Court, 28 Supreme Court Reporter, page 324.*—Curt Muller was the owner of a laundry in the city of Portland, Oreg., and was convicted in the circuit court of Multnomah County of a violation of an act of the Oregon legislature (page 148, Acts of 1903), which limits to ten per day the number of hours of employment of females "employed in any mechanical establishment, or factory, or laundry." The case was appealed to the supreme court of Oregon on the ground of the unconstitutionality of the act. The act was upheld and judgment affirmed. (See Bulletin No. 67, p. 877.) Muller then appealed to the Supreme Court of the United States, which gave its opinion upholding the validity of the law on grounds which appear in the following extracts from the opinion of the court as delivered by Justice Brewer:

> The single question is the constitutionality of the statute under which the defendant was convicted so far as it affects the work of a female in a laundry. That it does not conflict with any provisions of the State constitution is settled by the decision of the supreme court of the State.
>
> It is the law of Oregon that women, whether married or single, have equal contractual and personal rights with men. As said by Chief Justice Wolverton, in First National Bank *v.* Leonard, 36 Ore. 390, 396, after a review of the various statutes of the State upon the subject:
>
> "We may therefore say with perfect confidence that, with these three sections upon the statute book, the wife can deal, not only with her separate property, acquired from whatever source, in the same manner as her husband can with property belonging to him, but that she may make contracts and incur liabilities, and the same may be enforced against her, the same as if she were a femme sole. There is now no residuum of civil disability resting upon her which is not recognized as existing against the husband. The current runs steadily and strongly in the direction of the emancipation of the wife, and the policy, as disclosed by all recent legislation upon the subject in this State, is to place her upon the same footing as if she were a femme sole, not only with respect to her separate property, but as it affects her right to make binding contracts; and the most natural corollary to the situation is that the remedies for the enforcement of liabilities incurred are made coextensive and coequal with such enlarged conditions."
>
> It thus appears that, putting to one side the elective franchise, in the matter of personal and contractual rights they stand on the same plane as the other sex. Their rights in these respects can no more be infringed than the equal rights of their brothers. We held in Lochner *v.* New York, 198 U. S. 45, that a law providing that no laborer shall be required or permitted to work in bakeries more than sixty hours in a week or ten hours in a day was not as to men a legitimate exercise of the police power of the State, but an unreasonable, unnecessary and arbitrary interference with the right and liberty of the individual to contract in relation to his labor, and as such was in conflict with, and

void under, the Federal Constitution. That decision is invoked by plaintiff in error as decisive of the question before us. But this assumes that the difference between sexes does not justify a different rule respecting a restriction of the hours of labor.

While there have been but few decisions bearing directly upon the question, the following sustain the constitutionality of such legislation: Commonwealth *v.* Hamilton Mfg. Co., 125 Mass. 383; Wenham *v.* State, 65 Nebr. 394, 400, 406; State *v.* Buchanan, 29 Wash. 602; Commonwealth *v.* Beatty, 15 Pa. Sup. Ct. 5, 17; against them is the case of Ritchie *v.* People, 155 Ill. 98.

The legislation and opinions referred to in the margin may not be, technically speaking, authorities, and in them is little or no discussion of the constitutional question presented to us for determination, yet they are significant of a widespread belief that woman's physical structure, and the functions she performs in consequence thereof, justify special legislation restricting or qualifying the conditions under which she should be permitted to toil. Constitutional questions, it is true, are not settled by even a consensus of present public opinion, for it is the peculiar value of a written constitution that it places in unchanging form limitations upon legislative action, and thus gives a permanence and stability to popular government which otherwise would be lacking. At the same time, when a question of fact is debated and debatable, and the extent to which a special constitutional limitation goes is affected by the truth in respect to that fact, a widespread and long-continued belief concerning it is worthy of consideration. We take judicial cognizance of all matters of general knowledge.

It is undoubtedly true, as more than once declared by this court, that the general right to contract in relation to one's business is part of the liberty of the individual, protected by the fourteenth amendment to the Federal Constitution; yet it is equally well settled that this liberty is not absolute and extending to all contracts, and that a State may, without conflicting with the provisions of the fourteenth amendment, restrict in many respects the individual's power of contract. Without stopping to discuss at length the extent to which a State may act in this respect, we refer to the following cases in which the question has been considered: Allgeyer *v.* Louisiana, 165 U. S. 578; Holden *v.* Hardy, 169 U. S. 366; Lochner *v.* New York, supra.

That woman's physical structure and the performance of maternal functions place her at a disadvantage in the struggle for subsistence is obvious. This is especially true when the burdens of motherhood are upon her. Even when they are not, by abundant testimony of the medical fraternity continuance for a long time on her feet at work, repeating this from day to day, tends to injurious effects upon the body, and as healthy mothers are essential to vigorous offspring, the physical well-being of woman becomes an object of public interest and care in order to preserve the strength and vigor of the race.

Still again, history discloses the fact that woman has always been dependent upon man. He established his control at the outset by superior physical strength, and this control in various forms, with diminishing intensity, has continued to the present. As minors, though not to the same extent, she has been looked upon in the courts as needing especial care that her rights may be preserved. Education was long denied her, and while now the doors of the school room are opened and her opportunities for acquiring knowledge are great, yet even with that and the consequent increase of capacity for business affairs it is still true that in the struggle for subsistence she is not an equal competitor with her brother. Though limitations upon personal and contractual rights may be removed by legislation, there is that in her disposition and habits of life which will operate against a full assertion of those rights. She will still be where some legislation to protect her seems necessary to secure a real equality of right. Doubtless there are individual exceptions, and there are many respects in which she has an advantage over him; but looking at it from the viewpoint of the effort to maintain an independent position in life, she is not upon an equality. Differentiated by these matters from the other sex, she is properly placed in a class by herself, and legislation designed for her protection may be sustained, even when like legislation is not necessary for men and could not be sustained. It is impossible to close one's eyes to the fact that she still looks to her brother and depends upon him. Even though all restrictions on political, personal and contractual rights were taken away, and she stood, so far as statutes are concerned, upon an absolutely equal plane with him, it would still be true that she is so constituted that she will rest upon and look to him for protection; that her physical structure and a proper discharge of her maternal functions—having in view not merely her own health, but the well-being of the race—justify legislation to protect her from the greed as well as the passion of man. The limitations which this statute places upon her contractual powers, upon her right to agree with her employer as to the time she shall labor, are not imposed solely for her benefit, but also largely for the benefit of all. Many words can not make this plainer. The two sexes differ in structure of body, in the functions to be performed by each, in the amount of physical strength, in the capacity for long-continued labor, particularly when done standing, the influence of vigorous health upon the future well-being of the race, the self-reliance which enables one to assert full rights, and in the capacity to maintain the struggle for subsistence. This difference justifies a difference in legislation and upholds that which is designed to compensate for some of the burdens which rest upon her.

We have not referred in this discussion to the denial of the elective franchise in the State of Oregon, for while that may disclose a lack of political equality in all things with her brother, that is not of itself decisive. The reason runs deeper, and rests in the inherent difference between the two sexes, and in the different functions in life which they perform.

For these reasons, and without questioning in any respect the decision in Lochner *v.* New York, we are of the opinion that it can not be adjudged that the act in question is in conflict with the Federal Constitution, so far as it respects the work of a female in a laundry, and the judgment of the supreme court of Oregon is affirmed.

LABOR ORGANIZATIONS—RIGHT TO ORGANIZE—ANTITRUST LAW—CONSTITUTIONALITY—*Waters-Pierce Oil Company v. State, Court of Civil Appeals of Texas, 106 Southwestern Reporter, page 918.*—The company named was convicted of a violation of the antitrust law of Texas and appealed, the appeal resulting in an affirmance of the judgment of the lower court. The only point of interest in this case is a contention of the company as to the effect on the antitrust law of a subsequent law legalizing the formation of labor unions. The paragraph of the opinion of the court relating to this subject is reproduced:

> 4. It is contended on behalf of appellant that the antitrust act of May 25, 1899, was rendered unconstitutional by the passage of another statute at the same session of the legislature, entitled "An act to protect workingmen in the right of organization and the purposes thereof," approved May 27, 1899 (Laws 1899, p. 262, c. 153), wherein it was provided that from and after its passage it should be lawful for any and all persons engaged in any kind of work or labor, manual or mental, or both, to associate themselves together and form trade unions and other organizations for the purpose of protecting themselves in their personal work, personal labor, and personal service in their respective pursuits and employments. By the third section it is declared that that act shall not apply to combinations of associations of capital, or capital and persons natural or artificial formed for the purpose of limiting the production or consumption of labor's products, or for any other purpose in restraint of trade, and that nothing therein contained shall be held to interfere with the terms and conditions of private contracts with regard to the time of service or other stipulations between employers and employees, and "that nothing herein contained shall be construed to repeal, affect or diminish the force and effect of any statute now existing on the subject of trusts, conspiracies against trade, pools and monopolies." In view of these limitations placed upon that act, we are of the opinion that it was not the intention of the legislature to authorize anything to be done that was prohibited by the act of May 25, 1899. Hence we hold that this statute ingrafts no exemptions upon the antitrust statute referred to.

PROTECTION OF EMPLOYEES AS MEMBERS OF LABOR ORGANIZATIONS—CONSTITUTIONALITY OF STATUTE—*Adair v. United States, United States Supreme Court, 28 Supreme Court Reporter, page 277.*—This case was before the Supreme Court on appeal from the district court of the United States for the eastern district of Kentucky. William Adair was held to have violated the provision of the Federal arbitration act of June 1, 1898 (chap. 370, 30 Stat. 428; U. S. Comp. Stats. 1901, p. 3205), frequently spoken of as the Erdman act, which makes it unlawful to discharge an employee on account of membership in a labor organization. (152 Fed. Rep. 737. See Bulletin No. 72, p. 613.)

The appeal was based on the contention that the act was unconstitutional in this particular, as unwarrantably restraining the freedom of contract. This view was approved by the court, with two dissenting opinions filed and one judge taking no part in the proceedings. On account of the general interest in the question, both the opinion of the court, as delivered by Mr. Justice Harlan, and the dissenting opinions, will be presented practically in full.

Mr. Justice Harlan said:

This case involves the constitutionality of certain provisions of the act of Congress of June 1st, 1898, 30 Stat. 424, c. 370, concerning carriers engaged in interstate commerce and their employees.

By the first section of the act it is provided: "That the provisions of this act shall apply to any common carrier or carriers and their officers, agents, and employees, except masters of vessels and seamen, as defined in section 4612, Revised Statutes of the United States, engaged in the transportation of passengers or property wholly by railroad, or partly by railroad and partly by water, for a continuous carriage or shipment, from one State or Territory of the United States, or the District of Columbia, to any other State or Territory of the United States, or the District of Columbia, or from any place in the United States to an adjacent foreign country, or from any place in the United States through a foreign country to any other place in the United States." * * *

The 10th section, upon which the present prosecution is based, is in these words:

"That any employer subject to the provisions of this act and any officer, agent, or receiver of such employer; who shall require any employee, or any person seeking employment, as a condition of such employment, to enter into an agreement, either written or verbal, not to become or remain a member of any labor corporation, association, or organization; or shall threaten any employee with loss of employment, or shall unjustly discriminate against any employee because of his membership in such a labor corporation, association, or organization;" * * *

It may be observed in passing that while that section makes it a crime against the United States to unjustly discriminate against an employee of an interstate carrier because of his being a member of a labor organization, it does not make it a crime to unjustly discriminate against an employee of the carrier because of his not being a member of such an organization.

The present indictment was in the district court of the United States for the eastern district of Kentucky against the defendant Adair.

The specific charge in that [first] count was "that said William Adair, agent and employee of said common carrier and employer as aforesaid, in the district aforesaid, on and before the 15th day of October 1906, did unlawfully and unjustly discriminate against said O. B. Coppage, employee as aforesaid, by then and there discharging said O. B. Coppage from such employment of said common carrier and employer, because of his membership in said labor organization, and thereby did unjustly discriminate against an employee of a common carrier and employer engaged in interstate commerce because of his membership in a labor organization, contrary to the forms of the statute in such cases made and provided, and against the peace and dignity of the United States."

The accused Adair demurred to the indictment as insufficient in law, but the demurrer was overruled. After reviewing the authorities, in an elaborate opinion, the court held the 10th section of the act of Congress to be constitutional. The defendant pleaded not guilty, and after trial a verdict was returned of guilty on the first count and a judgment rendered that he pay to the United States a fine of $100. We shall, therefore, say nothing as to the second count of the indictment.

It thus appears that the criminal offense charged in the count of the indictment upon which the defendant was convicted was, in substance and effect, that being an agent of a railroad company engaged in interstate commerce and subject to the provisions of the above act of June 1st 1898 he discharged one Coppage from its service because of his membership in a labor organization—no other ground for such discharge being alleged.

May Congress make it a criminal offense against the United States—as by the 10th section of the act of 1898 it does—for an agent or officer of an interstate carrier, having full authority in the premises from the carrier, to discharge an employee from service simply because of his membership in a labor organization?

This question is admittedly one of importance, and has been examined with care and deliberation. And the court has reached a conclusion which, in its judgment, is consistent with both the words and spirit of the Constitution and is sustained as well by sound reason.

The first inquiry is whether the part of the 10th section of the act of 1898 upon which the first count of the indictment was based is repugnant to the fifth amendment of the Constitution declaring that no person shall be deprived of liberty or property without due process of law. In our opinion that section, in the particular mentioned, is an invasion of the personal liberty, as well as of the right of property, guaranteed by that amendment. Such liberty and right embraces the right to make contracts for the purchase of the labor of others and equally the right to make contracts for the sale of one's own labor; each right, however, being subject to the fundamental condition that no contract, whatever its subject-matter, can be sustained which the law, upon reasonable grounds, forbids as inconsistent with the public interests or as hurtful to the public order or as detrimental to the common good. This court has said that "in every well-ordered society, charged with the duty of conserving the safety of its members, the rights of the individual in respect of his liberty may, at times, under the pressure of great dangers, be subjected to such restraint, to be enforced by reasonable regulations, as the safety of the general public may demand." (Jacobson *v.* Massachusetts, 197 U. S. 11, 29, and authorities there cited.) Without stopping to consider what would have been the rights of the railroad company under the fifth amendment, had it been indicted under the act of Congress, it is sufficient in this case to say that as agent of the railroad company and as such responsible for the conduct of the business of one of its departments, it was the defendant Adair's right—and that right inhered in his personal liberty, and was also a right of property—to serve his employer as best he could, so long as he did nothing that was reasonably forbidden by law as injurious to the public interests. It was the right of the defendant to prescribe the terms upon which the services of Coppage would be accepted, and it was the right of Coppage to become or not, as he chose, an employee of the railroad company upon the terms offered to him. Mr. Cooley, in his treatise on Torts, p. 278, well says: "It is a part of every man's civil rights that he be left at liberty to refuse business relations with any person whomsoever, whether the refusal rests upon reason, or is the result of whim, caprice, prejudice or malice. With his reasons neither the public nor third persons have any legal concern. It is also his right to have business relations with anyone with whom he can make contracts, and if he is wrongfully deprived of this right by others, he is entitled to redress."

In Lochner *v.* New York, 198 U. S. 45, 53, 56 [Bulletin No. 59, p. 340], which involved the validity of a State enactment prescribing certain maximum hours for labor in bakeries, and which made it a misdemeanor for an employer to require or permit an employee in such an establishment to work in excess of a given number of hours each day, the court said: "The general right to make a contract in relation to his business is part of the liberty of the individual protected by the fourteenth amendment of the Federal Constitution. Allgeyer *v.* Louisiana, 165 U. S. 578. Under that provision no State can deprive any person of life, liberty or property without due process of law. The right to purchase or to sell labor is part of the liberty protected by this amendment, unless there are circumstances which exclude the right. There are, however, certain powers, existing in the sovereignty of each State in the Union, somewhat vaguely termed police powers, the exact description and limitation of which have not been attempted by the courts. Those powers, broadly stated and without, at present, any attempt at a more specific limitation, relate to the safety, health, morals and general welfare of the public. Both property and liberty are held on such reasonable conditions as may be imposed by the governing power of the State in the exercise of those powers, and with such conditions the fourteenth amendment was not designed to interfere. Mugler *v.* Kansas, 123 U. S. 623; In re Kemmler, 136 U. S. 436; Crowley *v.* Christensen, 137 U. S. 86; In re Converse, 137 U. S. 624." * * * "In every case that comes before this court, therefore, where legislation of this character is concerned and where the protection of the Federal Constitution is sought, the question necessarily arises: Is this a fair, reasonable and appropriate exercise of the police power of the State, or is it an unreasonable, unnecessary and arbitrary interference with the right of the individual to his personal liberty or to enter into those contracts in relation to labor which may seem to him appropriate or necessary for the support of himself and his family? Of course the liberty of contract relating to labor includes both parties to it. The one has as much right to purchase as the other to sell labor." Although there was a difference of opinion in that case among the members of the court as to certain propositions, there was no disagreement as to the general proposition that there is a liberty of contract which can not be unreasonably interfered with by legislation. The minority were of opinion that the business referred to in the New York statute was such as to require regulation, and that as the statute was not shown plainly and palpably to have imposed an unreasonable restraint upon freedom of contract, it should be regarded by the courts as a valid exercise of the State's power to care for the health and safety of its people.

While, as already suggested, the rights of liberty and property guaranteed by the Constitution against deprivation without due process of law, is subject to such reasonable restraints as the common good or the general welfare may require, it is not within the functions of government—at least in the absence of contract between the parties—to compel any person in the course of his business and against his will to accept or retain the personal services of another, or to compel any person, against his will, to perform personal services for another. The right of a person to sell his labor upon such terms as he deems proper is, in its essence, the same as the right of the purchaser of labor to prescribe the conditions upon which he will accept such labor from the person offering to sell it. So the right of the employee to quit the service of the employer, for whatever reason, is the same as the right of the employer, for whatever reason, to dispense with the services of such employee. It was the legal right of the defendant Adair—however unwise such a course might have been—to discharge Coppage because of his being a member of a labor organization, as it was the legal right of Coppage, if he saw fit to do so—however unwise such a course on his part might have been—to quit the service in which he was engaged, because the defendant employed some persons who were not members of a labor organization. In all such particulars the employer and the employee have equality of right, and any legislation that disturbs that equality is an arbitrary interference with the liberty of contract which no government can legally justify in a free land. * * * Of course, if the parties by contract fix the period of service, and prescribe the conditions upon which the contract may be terminated, such contract would control the rights of the parties as between themselves, and for any violation of those provisions the party wronged would have his appropriate civil action. And it may be—but upon that point we express no opinion—that in the case of a labor contract between an employer engaged in interstate commerce and his employee, Congress could make it a crime for either party without sufficient or just excuse or notice to disregard the terms of such contract or to refuse to perform it. In the absence, however, of a valid contract between the parties controlling their conduct toward each other and fixing a period of service, it can not be, we repeat, that an employer is under any legal obligation, against his will, to retain an employee in his personal service any more than an employee can be compelled, against his will, to remain in the personal service of another. So far as this record discloses the facts the defendant, who seemed to have authority in the premises, did not agree to keep Coppage in service for any particular time, nor did Coppage agree to remain in such service a moment longer than he chose. The latter was at liberty to quit the service without assigning any reason for his leaving. And the defendant was at liberty, in his discretion, to discharge Coppage from service without giving any reason for so doing.

As the relations and the conduct of the parties toward each other was not controlled by any contract other than a general employment on one side to accept the services of the employee and a general agreement on the other side to render services to the employer—no term being fixed for the continuance of the employment—Congress could not, consistently with the fifth amendment, make it a crime against the United States to discharge the employee because of his being a member of a labor organization.

But it is suggested that the authority to make it a crime for an agent or officer of an interstate carrier, having authority in the premises from his principal, to discharge an employee from service to such carrier, simply because of his membership in a labor organization, can be referred to the power of Congress to regulate interstate commerce, without regard to any question of personal liberty or right of property arising under the fifth amendment. This suggestion can have no bearing in the present discussion unless the statute, in the particular just stated, is within the meaning of the Constitution a regulation of commerce among the States. If it be not, then clearly the Government can not invoke the commerce clause of the Constitution as sustaining the indictment against Adair.

Let us inquire what is commerce, the power to regulate which is given to Congress?

This question has been frequently propounded in this court, and the answer has been—and no more specific answer could well have been given—that commerce among the several States comprehends traffic, intercourse, trade, navigation, communication, the transit of persons and the transmission of messages by telegraph—indeed, every species of commercial intercourse among the several States, but not to that commerce "completely internal, which is carried on between man and man, in a State, or between different parts of the same State, and which does not extend to or affect other States." The power to regulate interstate commerce is the power to prescribe rules by which such commerce must be governed. Of course, as has been often said, Congress has a large discretion in the selection or choice of the means to be employed in the regulation of interstate commerce, and such discretion is not to be interfered with except where that which is done is in plain violation of the Constitution. Northern Securities Co. *v.* United States, 193 U. S. 197, and authorities there cited. In this connection we may refer to Johnson *v.* Railroad, 196 U. S. 1[see Bulletin No. 56, p. 303], relied on in argument, which case arose under the act of Congress of March 2, 1893. 27 Stat. 531, c. 196. That act required carriers engaged in interstate commerce to equip their cars used in such commerce with automatic couplers and continuous brakes, and their locomotives with driving-wheel brakes. But the act upon its face showed that its object was to promote the safety of employees and travelers upon railroads; and this court sustained its validity upon the ground that it manifestly had reference to interstate commerce and was calculated to subserve the interests of such commerce by affording protection to employees and travelers. It was held that there was a substantial connection between the object sought to be attained by the act and the means provided to accomplish that object. So, in regard to Howard *v.* Illinois Central Railroad, etc., decided at the present term. No. 216. See Bulletin No. 74, p. 216.] In that case the court sustained the authority of Congress, under its power to regulate interstate commerce, to prescribe the rule of liability, as between interstate carriers and its employees in such interstate commerce, in cases of personal injuries received by employees while actually engaged in such commerce. The decision on this point was placed on the ground that a rule of that character would have direct reference to the conduct of interstate commerce and would, therefore, be within the competency of Congress to establish for commerce among the States, but not as to commerce completely internal to a State. Manifestly, any rule prescribed for the conduct of interstate commerce, in order to be within the competency of Congress under its power to regulate commerce among the States, must have some real or substantial relation to or connection with the commerce regulated. But what possible legal or logical connection is there between an employee's membership in a labor organization and the carrying on of interstate commerce? Such relation to a labor organization can not have, in itself and in the eye of the law, any bearing upon the commerce with which the employee is connected by his labor and services. Labor associations, we assume, are organized for the general purpose of improving or bettering the conditions and conserving the interests of its members as wage-earners—an object entirely legitimate and to be commended rather than condemned. But surely those associations as labor organizations have nothing to do with interstate commerce as such. One who engages in the service of an interstate carrier will, it must be assumed, faithfully perform his duty, whether he be a member or not a member of a labor organization. His fitness for the position in which he labors and his diligence in the discharge of his duties can not in law or sound reason depend in any degree upon his being or not being a member of a labor organization. It can not be assumed that his fitness is assured, or his diligence increased, by such membership, or that he is less fit or less diligent because of his not being a member of such an organization. It is the employee as a man and not as a member of a labor organization who labors in the service of an interstate carrier. Will it be said that the provision in question had its origin in the apprehension, on the part of Congress, that if it did not show more consideration for members of labor organizations than for wage-earners who were not members of such organizations, or if it did not insert in the statute some such provision as the one here in question, members of labor organizations would, by illegal or violent measures, interrupt or impair the freedom of commerce among the States? We will not indulge in any such conjectures, nor make them, in whole or in part, the basis of our decision. We could not do so consistently with the respect due to a coordinate department of the Government. We could not do so without imputing to Congress the purpose to accord to one class of wage-earners privileges withheld from another class of wage-earners engaged, it may be, in the same kind of labor and serving the same employer. Nor will we assume, in our consideration of this case, that members of labor organizations will, in any considerable numbers, resort to illegal methods for accomplishing any particular object they have in view.

Looking alone at the words of the statute for the purpose of ascertaining its scope and effect, and of determining its validity, we hold that there is no such connection between interstate commerce and membership in a labor organization as to authorize Congress to make it a crime against the United States for an agent of an interstate carrier to discharge an employee because of such membership on his part. If such a power exists in Congress it is difficult to perceive why it might not, by absolute regulation, require interstate carriers, under penalties, to employ in the conduct of its interstate business only members of labor organizations, or only those who are not members of such organizations—a power which could not be recognized as existing under the Constitution of the United States. No such rule of criminal liability as that to which we have referred can be regarded as, in any just sense, a regulation of interstate commerce. We need scarcely repeat what this court has more than once said, that the power to regulate interstate commerce, great and paramount as that power is, can not be exerted in violation of any fundamental right secured by other provisions of the Constitution. (Gibbons *v.* Ogden, 9 Wheat. 1, 196; Lottery Case, 188 U. S. 321, 353.)

It results, on the whole case, that the provision of the statute under which the defendant was convicted must be held to be repugnant to the fifth amendment and as not embraced by nor within the power of Congress to regulate interstate commerce, but under the guise of regulating interstate commerce and as applied to this case it arbitrarily sanctions an illegal invasion of the personal liberty as well as the right of property of the defendant Adair.

We add that since the part of the act of 1898 upon which the first count of the indictment is based, and upon which alone the defendant was convicted, is severable from its other parts, and as what has been said is sufficient to dispose of the present case, we are not called upon to consider other and independent provisions of the act, such, for instance, as the provisions relating to arbitration. This decision is therefore restricted to the question of the validity of the particular provision in the act of Congress making it a crime against the United States for an agent or officer of an interstate carrier to discharge an employee from its service because of his being a member of a labor organization.

The judgment must be reversed, with directions to set aside the verdict and judgment of conviction, sustain the demurrer to the indictment, and dismiss the case.

Mr. Justice McKenna dissenting, said:

The opinion of the court proceeds upon somewhat narrow lines and either omits or does not give adequate prominence to the considerations which, I think, are determinative of the questions in the case. The principle upon which the opinion is grounded is, as I understand it, that a labor organization has no legal or logical connection with interstate commerce, and that the fitness of an employee has no dependence or relation with his membership in such organization. It is hence concluded that to restrain his discharge merely on account of such membership is an invasion of the liberty of the carrier guaranteed by the fifth amendment of the Constitution of the United States. The conclusion is irresistible if the propositions from which it is deduced may be viewed as abstractly as the opinion views them. May they be so viewed?

A summary of the act is necessary to understand section 10. Detach that section from the other provisions of the act and it might be open to condemnation.

The first section of the act designates the carriers to whom it shall apply. The second section makes it the duty of the chairman of the Interstate Commerce Commission and the Commissioner of Labor, in case of a dispute between carriers and their employees which threatens to interrupt the business of the carriers, to put themselves in communication with the parties to the controversy and use efforts to "mediation and conciliation." If the efforts fail, then section 3 provides for the appointment of a board of arbitration—one to be named by the carrier, one by the labor organization to which the employees belong, and the two thus chosen shall select a third.

There is a provision that if the employees belong to different organizations they shall concur in the selection of the arbitrator. The board is to give hearings; power is vested in the board to summon witnesses, and provision is made for filing the award in the clerk's office of the circuit court of the United States for the district where the controversy arose. Other sections complete the scheme of arbitration thus outlined, and make, as far as possible, the proceedings of the arbitrators judicial, and pending them put restrictions on the parties and damages for violation of the restrictions.

Even from this meager outline may be perceived the justification and force of section 10. It prohibits discrimination by a carrier engaged in interstate commerce, in the employment under the circumstances hereafter mentioned or the discharge from employment of members of labor organizations "because of such membership." This the opinion condemns. The actions prohibited, it is asserted, are part of the liberty of a carrier protected by the Constitution of the United States from limitation or regulation. I may observe that the declaration is clear and unembarrassed by any material benefit to the carrier from its exercise. It may be exercised with reason or without reason, though the business of the carrier is of public concern. This, then, is the contention, and I bring its elements into bold relief to submit against them what I deem to be stronger considerations, based on the statute and sustained by authority.

I take for granted that the expressions of the opinion of the court, which seems to indicate that the provisions of section 10 are illegal because their violation is made criminal, are used only for description and incidental emphasis, and not as the essential ground of the objections to those provisions.

I may assume at the outset that the liberty guaranteed by the fifth amendment is not a liberty free from all restraints and limitations, and this must be so or government could not be beneficially exercised in many cases. Therefore in judging of any legislation which imposes restraints or limitations the inquiry must be, what is their purpose and is the purpose within one of the powers of government? Applying this principle immediately to the present case without beating about in the abstract, the inquiry must be whether section 10 of the act of Congress has relation to the purpose which induced the act and which it was enacted to accomplish, and whether such purpose is in aid of interstate commerce and not a mere restriction upon the liberty of carriers to employ whom they please, or to have business relations with whom they please. In the inquiry there is necessarily involved a definition of interstate commerce and of what is a regulation of it. As to the first, I may concur with the opinion; as to the second, an immediate and guiding light is afforded by the case of Howard *v.* Illinois R. R., recently decided. In that case there was a searching scrutiny of the powers of Congress, and it was held to be competent to establish a new rule of liability of the carrier to his employees—in a word, competent to regulate the relations of master and servant, a relation apparently remote from commerce, and one which was earnestly urged by the railroad to be remote from commerce. To the contention the court said: "But we may not test the power of Congress to regulate commerce solely by abstractly considering the broad subject to which a regulation relates, irrespective of whether the regulation in question is one of interstate commerce. On the contrary, the test of power is not merely the matter regulated, but whether the regulation is directly one of interstate commerce or is embraced within the grant conferred on Congress to use all lawful means necessary and appropriate to the execution of that power to regulate commerce." In other words, that the power is not confined to a regulation of the mere movement of goods or persons.

And there are other examples in our decisions—examples, too, of liberty of contract and liberty of forming business relations (made conspicuous as grounds of decision in the present case)—which were compelled to give way to the power of Congress. (Northern Securities Company *v.* United States, 193 U. S. 200.) In that case exactly the same definitions were made as made here and the same contentions were pressed as are pressed here. The Northern Securities Company was not a railroad company. Its corporate powers were limited to buying, selling and holding stock, bonds and other securities, and, it was contended, that as such business was not commerce at all it could not be within the power of Congress to regulate. The contention was not yielded to, though it had the support of members of this court. Asserting the application of the antitrust act of 1890 to such business and the power of Congress to regulate it, the court said "that a sound construction of the Constitution allows to Congress a large discretion 'with respect to the means by which the powers it [the commerce clause] confers are to be carried into execution, which enables that body to perform the high duties assigned to it, in the manner most beneficial to the people.'" It was in recognition of this principle that it was declared in United States *v.* Joint Traffic Association, 171 U. S. 571: "The prohibition of such contracts [contracts fixing rates] may in the judgment of Congress be one of the reasonable necessities of proper regulation of commerce, and Congress is the judge of such necessity and propriety, unless, in case of a possible gross perversion of the principle, the courts might be applied to for relief." The contentions of the parties in the case invoked the declaration. There as here an opposition was asserted between the liberty of the railroads to contract with one another and the power of Congress to regulate commerce. That power was pronounced paramount, and it was not perceived, as it seems to be perceived now, that it was subordinate and controlled by the provisions of the fifth amendment. Nor was the relation of the power of Congress to that amendment overlooked. It was commented upon and reconciled. And there is nothing whatever in Gibbons *v.* Ogden, 9 Wheat. 1, or in Lottery Case, 188 U. S. 321, which is to the contrary.

From these considerations we may pass to an inspection of the statute of which section 10 is a part, and inquire as to its purpose, and if the means which it employs has relation to that purpose and to interstate commerce. The provisions of the act are explicit and present a well coordinated plan for the settlement of disputes between carriers and their employees, by bringing the disputes to arbitration and accommodation, and thereby prevent strikes and the public disorder and derangement of business that may be consequent upon them. I submit no worthier purpose can engage legislative attention or be the object of legislative action, and, it might be urged, to attain which the Congressional judgment of means should not be brought under a rigid limitation and condemned, if it contribute in any degree to the end, as a "gross perversion of the principle" of regulation, the condition which, it was said in United States *v.* Joint Traffic Association, supra, might justify an appeal to the courts.

We are told that labor associations are to be commended. May not then Congress recognize their existence; yes, and recognize their power as conditions to be counted with in framing its legislation? Of what use would it be to attempt to bring bodies of men to agreement and compromise of controversies if you put out of view the influences which move them or the fellowship which binds them—maybe controls and impels them, whether rightfully or wrongfully, to make the cause of one the cause of all? And this practical wisdom Congress observed—observed, I may say, not in speculation or uncertain prevision of evils, but in experience of evils—an experience which approached to the dimensions of a national calamity. The facts of history should not be overlooked nor the course of legislation. The act involved in the present case was preceded by one enacted in 1888 of similar purport. (25 Stat. 501.) That act did not recognize labor associations, or distinguish between the members of such associations and the other employees of carriers. It failed in its purpose, whether from defect in its provisions or other cause we may only conjecture. At any rate, it did not avert the strike at Chicago in 1894. Investigation followed, and, as a result of it, the act of 1898 was finally passed. Presumably its provisions and remedy were addressed to the mischief which the act of 1888 failed to reach or avert. It was the judgment of Congress that the scheme of arbitration might be helped by engaging in it the labor associations. Those associations unified bodies of employees in every department of the carriers, and this unity could be an obstacle or an aid to arbitration. It was attempted to be made an aid, but how could it be made an aid if, pending the efforts of "mediation and conciliation" of the dispute, as provided in section 2 of the act, other provisions of the act may be arbitrarily disregarded, which are of concern to the members in the dispute? How can it be an aid, how can controversies which may seriously interrupt or threaten to interrupt the business of carriers (I paraphrase the words of the statute), be averted or composed if the carrier can bring on the conflict or prevent its amicable settlement by the exercise of mere whim and caprice? I say mere whim or caprice, for this is the liberty which is attempted to be vindicated as the constitutional right of the carriers. And it may be exercised in mere whim and caprice. If ability, the qualities of efficient and faithful workmanship can be found outside of labor associations, surely they may be found inside of them. Liberty is an attractive theme, but the liberty which is exercised in sheer antipathy does not plead strongly for recognition.

There is no question here of the right of a carrier to mingle in his service "union" and "nonunion" men. If there were, broader considerations might exist. In such a right there would be no discrimination for the "union" and no discrimination against it. The efficiency of an employee would be its impulse and ground of exercise.

I need not stop to conjecture whether Congress could or would limit such right. It is certain that Congress has not done so by any provision of the act under consideration. Its letter, spirit and purpose are decidedly the other way. It imposes, however, a restraint, which should be noticed. The carriers may not require an applicant for employment or an employee to agree not to become or remain a member of a labor organization. But this does not constrain the employment of anybody, be he what he may.

But it is said it can not be supposed that labor organizations will, "by illegal or violent measures, interrupt or impair the freedom of commerce," and to so suppose would be disrespect to a coordinate branch of the Government and to impute to it a purpose "to accord to one class of wage-earners privileges withheld from another class of wage-earners engaged, it may be, in the same kind of labor and serving the same employer." Neither the supposition or the disrespect is necessary, and, it may be urged, they are no more invidious than to impute to Congress a careless or deliberate or purposeless violation of the constitutional rights of the carriers. Besides, the legislation is to be accounted for. It by its letter makes a difference between members of labor organizations and other employees of carriers. If it did not, it would not be here for review. What did Congress mean? Had it no purpose? Was it moved by no cause? Was its legislation mere wantonness and an aimless meddling with the commerce of the country? These questions may find their answers in In re Debs, 158 U. S. 564.

I have said that it is not necessary to suppose that labor organizations will violate the law, and it is not. Their power may be effectively exercised without violence or illegality, and it can not be disrespect to Congress to let a committee of the Senate speak for it and tell the reason and purposes of its legislation. The Committee on Education in its report said of the bill: "The measure under consideration may properly be called a voluntary arbitration bill, having for its object the settlement of disputes between capital and labor, as far as the interstate transportation companies are concerned. The necessity for the bill arises from the calamitous results in the way of ill-considered strikes arising from the tyranny of capital or the unjust demands of labor organizations, whereby the business of the country is brought to a standstill and thousands of employees, with their helpless wives and children, are confronted with starvation." And, concluding the report, said: "It is our opinion that this bill, should it become a law, would reduce to a minimum labor strikes which affect interstate commerce, and we therefore recommend its passage."

With the report was submitted a letter from the secretary of the Interstate Commerce Commission, which expressed the judgment of that body, formed, I may presume, from experience of the factors in the problem. The letter said: "With the corporations as employers on one side and the organizations of railway employees as the other, there will be a measure of equality of power and force which will surely bring about the essential requisites of friendly relation, respect, consideration, and forbearance." And again: "It has been shown before the labor commission of England that where the associations are strong enough to command the respect of their employers the relations between employer and employee seem most amicable. For there the employers have learned the practical convenience of treating with one thoroughly representative body instead of with isolated fragments of workmen; and the labor associations have learned the limitations of their powers."

It is urged by defendant in error that "there is a marked distinction between a power to regulate commerce and a power to regulate the affairs of an individual or corporation engaged in such commerce," and how can it be, it is asked, a regulation of commerce to prevent a carrier from selecting his employees or constraining him to keep in his service those whose loyalty to him is "seriously impaired, if not destroyed, by their prior allegiance to their labor unions?" That the power of regulation extends to the persons engaged in interstate commerce is settled by decision. (Howard *v.* Illinois Central R. R., supra, and the cases cited in Mr. Justice Moody's dissenting opinion.) The other proposition points to no evil or hazard of evil. Section 10 does not constrain the employment of incompetent workmen and gives no encouragement or protection to the disloyalty of an employee or to deficiency in his work or duty. If guilty of either he may be instantly discharged without incurring any penalty under the statute.

Counsel also makes a great deal of the difference between direct and indirect effect upon interstate commerce, and assert that section 10 is an indirect regulation at best and not within the power of Congress to enact. Many cases are cited, which, it is insisted, sustain the contention. I can not take time to review the cases. I have already alluded to the contention, and it is enough to say that it gives too much isolation to section 10. The section is part of the means to secure and make effective the scheme of arbitration set forth in the statute. The contention, besides, is completely answered by Howard *v.* Illinois Central R. R., supra. In that case, as we have seen, the power of Congress was exercised to establish a rule of liability of a carrier to his employees for personal injuries received in his service. It is manifest that the kind or extent of such liability is neither traffic nor intercourse, the transit of persons or the carrying of things. Indeed such liability may have wider application than to carriers. It may exist in a factory; it may exist on a farm, and in both places, or in commerce—its direct influence might be hard to find or describe. And yet this court did not hesitate to pronounce it to be within the power of Congress to establish. "The primary object," it was said in Johnson *v.* Railroad, 196 U. S. 1, of the safety-appliance act, "was to promote the public welfare by securing the safety of employees and travelers." The rule of liability for injuries is even more round about in its influence on commerce and as much so as the prohibition of section 10. To contend otherwise seems to me to be an oversight of the proportion of things. A provision of law which will prevent or tend to prevent the stoppage of every wheel in every car of an entire railroad system certainly has as direct influence on interstate commerce as the way in which one car may be coupled to another, or the rule of liability for personal injuries to an employee. It also seems to me to be an oversight of the proportions of things to contend that in order to encourage a policy of arbitration between carriers and their employees which may prevent a disastrous interruption of commerce, the derangement of business, and even greater evils to the public welfare, Congress can not restrain the discharge of an employee, and yet can, to enforce a policy of unrestrained competition between railroads, prohibit reasonable agreements between them as to the rates merchandise shall be carried. And mark the contrast of what is prohibited. In the one case the restraint, it may be, of a whim—certainly of nothing that affects the ability of an employee to perform his duties; nothing, therefore, which is of any material interest to the carrier; in the other case a restraint of a carefully considered policy which had as its motive great material interests and benefits to the railroads, and, in the opinion of many, to the public. May such action be restricted, must it give away to the public welfare, while the other, moved, it may be, by prejudice and antagonism, is intrenched impregnably in the fifth amendment of the Constitution against regulation in the public interest.

I would not be misunderstood. I grant that there are rights which can have no material measure. There are rights which, when exercised in a private business, may not be disturbed or limited. With them we are not concerned. We are dealing with rights exercised in a quasi public business and therefore subject to control in the interest of the public.

I think the judgment should be affirmed.

Mr. Justice Holmes, dissenting, said:

I also think that the statute is constitutional, and but for the decision of my brethren I should have felt pretty clear about it.

As we all know, there are special labor unions of men engaged in the service of carriers. These unions exercise a direct influence upon the employment of labor in that business, upon the terms of such employment and upon the business itself. Their very existence is directed specifically to the business, and their connection with it is at least as intimate and important as that of safety couplers, and, I should think, as the liability of master to servant, matters which, it is admitted, Congress might regulate, so far as they concern commerce among the States. I suppose that it hardly would be denied that some of the relations of railroads with unions of railroad employees are closely enough connected with commerce to justify legislation by Congress. If so, legislation to prevent the exclusion of such unions from employment is sufficiently near.

The ground on which this particular law is held bad is not so much that it deals with matters remote from commerce among the States, as that it interferes with the paramount individual rights secured by the fifth amendment. The section is, in substance, a very limited interference with freedom of contract, no more. It does not require the carriers to employ anyone. It does not forbid them to refuse to employ anyone, for any reason they deem good, even where the notion of a choice of persons is a fiction and wholesale employment is necessary upon general principles that it might be proper to control. The section simply prohibits the more powerful party to exact certain undertakings, or to threaten dismissal or unjustly discriminate on certain grounds against those already employed. I hardly can suppose that the grounds on which a contract lawfully may be made to end are less open to regulation than other terms. So I turn to the general question whether the employment can be regulated at all. I confess that I think that the right to make contracts at will that has been derived from the word liberty in the amendments has been stretched to its extreme by the decisions; but they agree that sometimes the right may be restrained. Where there is, or generally is believed to be, an important ground of public policy for restraint the Constitution does not forbid it, whether this court agrees or disagrees with the policy pursued. It can not be doubted that to prevent strikes, and, so far as possible, to foster its scheme of arbitration, might be deemed by Congress an important point of policy, and I think it impossible to say that Congress might not reasonably think that the provision in question would help a good deal to carry its policy along. But suppose the only effect really were to tend to bring about the complete unionizing of such railroad laborers as Congress can deal with, I think that object alone would justify the act. I quite agree that the question what and how much good labor unions do, is one on which intelligent people may differ—I think that laboring men sometimes attribute to them advantages, as many attribute to combinations of capital disadvantages, that really are due to economic conditions of a far wider and deeper kind—but I could not pronounce it unwarranted if Congress should decide that to foster a strong union was for the best interest, not only of the men, but of the railroads and the country at large.

DECISIONS UNDER COMMON LAW.

EMPLOYER AND EMPLOYEE—RELATION—STUDENT FIREMAN—FRAUDULENT REPRESENTATIONS—EFFECT ON LIABILITY—*Norfolk and Western Railway Company v. Bondurant's Administrator, Supreme Court of Appeals of Virginia, 59 Southeastern Reporter, page 1091.*—In this case action was brought to recover for the death of one Bondurant, who was accidentally killed while acting as a student fireman on an engine of the Norfolk and Western Railway Company. The evidence disclosed the fact that Bondurant had practiced fraud in order to secure his position, representing that he was more than 21 years of age, a rule of the company prohibiting the employment of minors in such position without the consent of the parent or guardian. The case was tried in the circuit court of Amherst County, which gave judgment for the plaintiff. The trial proceeded upon the assumption that the relation of master and servant actually existed. This position was denied by the railroad company, and on appeal the supreme court ruled that the relation of master and servant did not exist and that no damages were recoverable in the circumstances. The principal features of the opinion of the court, which was delivered by Judge Keith, are reproduced:

A student fireman may, or may not, be an employee. Whether he is or not in a particular case depends upon circumstances.

In Weisser *v.* Southern Pacific Ry. Co., 148 Cal. 426, 83 Pac. 439, cited by defendant in error, it was held that a student brakeman, on freight trains of defendant at his own request and by permission of defendant, for the purpose of gaining experience to render him competent to act as a regular brakeman, and who was entirely subject to defendant's orders, and was required to perform such ordinary duties of brakeman as were allotted to him, was a fellow-servant of the other brakemen, although he was receiving no pecuniary compensation.

So, in Barstow *v.* Old Colony R. Co., 143 Mass. 535, 10 N. E. 255, it was held that if a person undertake voluntarily to perform service for a corporation, and the agent of such corporation assents to his performing such service, he stands in the relation of a servant of the corporation while so engaged, which is the proposition in this case for which we presume it was cited by the defendant in error, and as to the correctness of which there can be no doubt.

In Millsap's Adm'r *v.* Louisville, etc., Ry. Co., 69 Miss. 423, 13 South. 696, it was held that one who by permission of a railway company acts as fireman of its locomotive is a servant of the company, though he acts without compensation merely to learn the business. He was also held to be a fellow-servant of the train dispatcher, whose negligence caused the injury, and therefore a recovery was denied.

But in none of these cases was there misrepresentation as to age or a rule prohibiting the employment of infants.

In all of these cases there is an absence of two circumstances upon which plaintiff in error rests its case: First, that the railroad company prohibited the employment of an infant; and, second, that the deceased, by misrepresenting his age, obtained permission to ride upon the engine where he was injured.

Cases of negligence have become so numerous that it is impossible to discuss all that bear upon the subject, and therefore it becomes necessary to select those which are most pertinent.

In the case of Fitzmaurice *v.* N. Y., N. H. & H. R. R. Co., 192 Mass. 159, 78 N. E. 418, 6 L. R. A. (N. S.) 1146, the facts were as follows: The plaintiff, while riding upon a train of the defendant, was injured by a collision, and no question was made that she would have been entitled to a verdict in her favor if she had been a passenger. She was a minor, and was riding upon a three-months season ticket which was good only for students under 18 years of age. She had obtained this ticket by presenting to the defendant's ticket agent a certificate, purporting to be signed by her father, that she was under 18 years of age and was a pupil in the Hollander Art School, Boston, and agreeing that she would not use the ticket otherwise than in going to and from school, and also presenting a certificate, purporting to be signed by "J. F. Miner, Principal, Hollander Art School, Boylston Street, Boston, Mass.," that she was a pupil in his school and as he fully believed intended to remain so for the next three months. She was at this time over 18 years of age, as she testified, lived in Marlboro, and was employed in Hollander's dry goods store in Boston. The regular price for a season ticket was $32. The reduced rate for students under 18 years of age, at which the plaintiff procured it, was $16. She had been riding upon this ticket nearly every day, except Sunday, for over a month, and the coupons had been received by the conductor. Upon the face of the ticket were the words: "Good only for a person under 18 years of age." The jury having found the amount of the plaintiff's damages, if she was entitled to recover, the judge ordered a verdict for the defendant. Upon this state of facts, the supreme court of Massachusetts held:

"The defendant had the right to establish a reduced rate for students under a fixed age. * * * The plaintiff knew that she did not come within the class to which this offer of a reduced rate was made, and obtained her ticket by presenting certificates of facts which she knew to be false. She thus obtained by false representations a ticket to which she knew that she was not entitled. Whatever rights she had to be regarded as a passenger on the defendant's train she had acquired solely by the fraud which she had practiced upon the defendant. She had no right to profit by her fraud. She had no right to rely upon the consent of the railway company to her entering its train as a passenger, when she had obtained that consent merely by gross misrepresentations. Accordingly she was not lawfully upon the defendant's train. She was in no better position than that of a mere trespasser. This principle has been affirmed in other jurisdictions. Thus it has been held that a person traveling over a railroad on a free pass or a mileage ticket which had been issued to another name and was not transferable was barred by his fraudulent conduct from recovering for a personal injury, unless it was due to negligence so gross as to show a willful injury. If the plaintiff had fraudulently evaded the payment of any fare, she certainly would not have become a passenger, and the defendant's utmost duty to her while she was upon its train would have been to abstain from doing her any willful or reckless injury. But such a case can not be distinguished in principle from the case at bar, in which the plaintiff obtained her ticket at a reduced price by successfully practicing a fraud. The only relation which existed between the plaintiff and defendant was induced by her fraud; and she can not be allowed to set up that relation against the defendant as a basis of recovery.

This case is annotated in 6 L. R. A. (N. S.) 1146, and a number of cases not cited in the opinion are mentioned in the note; and it seems to us to be not only good law, but good morals, as well. It so completely covers the case under consideration, and is so well supported by the reasoning of the court and the authorities cited, that we are content to rest upon it.

Defendant in error relies also upon the argument that there was no relation between the misrepresentation of Bondurant as to his age and the accident by which he was injured.

It is true that his being an infant in no way contributed to the accident. It is equally true that in Fitzmaurice *v.* Railroad, supra, the fact that plaintiff was over 18 years of age in no wise contributed to the accident. Doubtless the accident would have taken place, whether Bondurant had been upon the engine or not; but, if he had not been upon the engine, he would not have been injured by the collision. The controlling question in this case, however, is: In what relation did the intestate of the defendant in error stand to the railroad company at the time of the injury, and what duty did the railroad company owe to him? It is as true of him as it was of Miss Fitzmaurice that the only relation which existed between him and the railroad company was induced by fraud. But for his fraud and misrepresentation, he could never have been upon the engine. He was, therefore, a trespasser, or at most a bare licensee, to whom the railroad company stood in no contractual relation and owed no other duty than not to injure him recklessly, wantonly, or willfully.

LAWS OF VARIOUS STATES RELATING TO LABOR, ENACTED SINCE JANUARY 1, 1904.

[The Tenth Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor, in force January 1, 1904. Later enactments are reproduced in successive issues of the Bulletin, beginning with Bulletin No. 57, the issue of March, 1905. A cumulative index of these later enactments is to be found on page 657 et seq. of this issue.]

MASSACHUSETTS.

ACTS OF 1907.

CHAPTER 164.—*Provisions for accidents in factories.*

[See Bulletin No. 73, p. 872.]

CHAPTER 267.—*Hours of labor of women and children—Night work.*

[See Bulletin No. 73, p. 713.]

CHAPTER 269.—*Hours of labor of employees on public works.*

SECTION 1. Section one of chapter five hundred and seventeen of the acts of the year nineteen hundred and six is hereby amended * * * so as to read as follows:

Section 1 (as amended by chapter 570, Acts of 1907). Eight hours shall constitute a day's work for all laborers, workmen and mechanics now or hereafter employed by or on behalf of the Commonwealth, or of any county therein, or of any city or town which has accepted the provisions of section twenty of chapter one hundred and six of the Revised Laws. No laborer, workman or mechanic so employed shall be requested or required to work more than eight hours in any one calendar day or more than forty-eight hours in any one week except in cases of extraordinary emergency. Only a case of danger to property, to life, to public safety or to public health shall be considered a case of extraordinary emergency within the meaning of this section. Engineers shall be considered mechanics within the meaning of this act. But in cases where a weekly half holiday is given the hours of labor upon the other working days of the week may be increased sufficiently to make a total of forty-eight hours for the week's work. Threat of loss of employment or threat to obstruct or prevent the obtaining of employment, or threat to refrain from employing in the future shall be considered requiring, within the meaning of this section. This section shall not apply to persons employed in any State, county or municipal institution, on the farm, or in the care of the grounds, in the stable, in the domestic or kitchen and dining-room service, or in storerooms and offices.

SEC. 2. Section two of said chapter five hundred and seventeen is hereby amended * * * so as to read as follows:

Section 2. Every contract, excluding contracts for the purchase of material or supplies, to which the Commonwealth, or of any county therein, or of any city or town which has accepted the provisions of section twenty of chapter one hundred and six of the Revised Laws, is a party which may involve the employment of laborers, workmen or mechanics shall contain a stipulation that no laborer, workman or mechanic working within this Commonwealth in the employ of the contractor, subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract shall be requested or required to work more than eight hours in any one calendar day and every such contract which does not contain this stipulation shall be null and void.

SEC. 3. Section four of said chapter five hundred and seventeen is hereby amended * * * so as to read as follows:

Section 4. Any person or contractor or subcontractor, or any agent or person acting on behalf of any contractor or subcontractor, or any agent or official of the Commonwealth or of any county, city or town who violates any provision of this act shall be subject to a penalty of fifty dollars for each offense.

Approved April 3, 1907.

CHAPTER 373.—*Examination, etc., of stationary engineers and firemen.*

SECTION 1. Section seventy-eight of chapter one hundred and two of the Revised Laws is hereby amended * * * so as to read as follows:

Section 78. No person shall have charge of or operate a steam boiler or engine in this Commonwealth, except boilers and engines upon locomotives, motor road vehicles, boilers and engines in private residences, boilers in apartment houses of less than five flats, boilers and engines under the jurisdiction of the United States, boilers and engines used for agricultural purposes exclusively, boilers and engines of less than eight horsepower, and boilers used for heating purposes exclusively, which are provided with a device approved by the chief of the district police limiting the pressure carried to fifteen pounds to the square inch, unless he holds a license as hereinafter provided. The owner or user of a steam boiler or engine, other than boilers or engines above excepted, shall not operate or cause to be operated a steam boiler or engine for a period of more than one week, unless the person in charge of and operating it is duly licensed.

SEC. 2. Section eighty-two of said chapter one hundred and two, as amended * * * is hereby further amended by striking out said section and inserting in place thereof the following:

Section 82. Licenses shall be granted according to the competence of the applicant and shall be distributed in the following classes —Engineers' licenses—First class, to have charge of and operate any steam plant. Second class, to have charge of and operate a boiler or boilers, and to have charge of and operate engines, no one of which shall exceed one hundred and fifty horsepower, or to operate a first class plant under the engineer in direct charge of the plant. Third class, to have charge of and operate a boiler or boilers not exceeding in the aggregate one hundred and fifty horsepower, and an engine not exceeding fifty horsepower, or to operate a second class plant under the engineer in direct charge of the plant. Fourth class, to have charge of and operate hoisting and portable engines and boilers. Firemen's licenses—Extra first class, to have charge of and operate any boiler or boilers. First class, to have charge of and operate any boiler or boilers where the pressure carried does not exceed twenty-five pounds to the square inch, or to operate high-pressure boilers under the engineer or fireman in direct charge thereof. Second class, to operate any boiler or boilers under the engineer or fireman in direct charge thereof. Any person holding a first class or second class fireman's license at the time of the passage of this act shall receive a first class fireman's license under this act. A person holding an extra first class or first class fireman's license may operate a third class plant under the engineer in direct charge of the plant. A person holding an engineer's or fireman's license who desires to have charge of or to operate a particular steam plant or type of plant may, providing he holds an engineer's or fireman's license, if he files with his application a written request signed by the owner or user of said plant for such examination, be examined as to his competence for such service and no other, and if found competent and trustworthy shall be granted a license for such service and no other. No special license shall be granted to give any person charge of a plant over one hundred and fifty horsepower.

SEC. 3. Section eighty-four of said chapter one hundred and two is hereby amended by striking out the said section and inserting in place thereof the following:

Section 84. A person who is aggrieved by the action of an examiner in refusing or revoking a license may appeal therefrom to the remaining examiners, three or more of whom shall together act as a board of appeal, and shall have the power to hear the parties and pass upon the subjects of appeal. If appeal is taken it must be within one month after the decision of the examiner. The appellant may have the privilege of having one first class engineer present during the hearing of his appeal, but he shall take no part therein. The decision of the majority of such examiners so acting as a board of appeal shall be final if approved by the chief of the district police.

SEC. 4. Section eighty-five of said chapter one hundred and two is hereby amended * * * so as to read as follows:

Section 85. An engineer's or fireman's license, granted under the provisions of the seven preceding sections or the corresponding provisions of earlier laws, shall be placed so as to be easily read in a conspicuous place in the engine room or boiler room of the plant operated by the holder of such license. The person in charge of a stationary steam boiler upon which the safety valve is set to blow off at more than twenty-five pounds pressure to the square inch, except boilers upon locomotives, motor road vehicles, boilers in private residences, boilers in apartment houses of less than five flats, boilers under the jurisdiction of the United States, boilers used for agricultural purposes exclusively, and boilers of less than eight horsepower, shall keep a daily record of the boiler, its condition when under steam and all repairs made and work done on it, upon forms to be obtained upon application from the boiler inspection department. These records shall be kept on file and shall be accessible at all times to the members of the boiler inspection department.

Approved May 4, 1907.

CHAPTER 465.- *Inspection of steam boilers.*

[See Bulletin No. 73, pp. 872-876.]

CHAPTER 537.—*Inspection of factories and workshops—Inspectors of health.*

SECTION 1. The State board of health shall, as soon as may be after the passage of this act, divide the Commonwealth into not more than fifteen districts, to be known as health districts, in such manner as it may deem necessary or proper for carrying out the purposes of this act.

SEC. 2. After the division aforesaid has been made, the governor, with the advice and consent of the council, shall appoint in each health district one practical and discreet person, learned in the science of medicine and hygiene, to be State inspector of health in that district. Every nomination for such office shall be made at least seven days prior to the appointment. The said State inspectors of health shall hold their offices for a period of five years from the time of their respective appointments, but shall be liable to removal from office by the governor and council at any time.

SEC. 3. Every State inspector of health * * * shall inform himself concerning the health of all minors employed in factories within his district, and, whenever he may deem it advisable or necessary, he shall call the ill health or physical unfitness of any minor to the attention of his or her parents or employers and of the State board of health.

SEC. 5. The State inspectors of health shall, under the direction of the State board of health and in place of the inspection department of the district police, enforce the provisions of section forty-one of chapter one hundred and four of the Revised Laws so far as said section provides that factories shall be well ventilated and kept clean, sections forty-one, forty-four and forty-seven to sixty-one, inclusive, of chapter one hundred and six of the Revised Laws, chapter three hundred and twenty-two of the acts of the year nineteen hundred and two, chapter four hundred and seventy-five of the acts of the year nineteen hundred and three, chapter two hundred and thirty-eight of the acts of the year nineteen hundred and five, and chapter two hundred and fifty of the acts of the year nineteen hundred and six; and the powers and duties heretofore conferred and imposed upon the members of said inspection department of the district police by section eight of chapter one hundred and eight of the Revised Laws in respect to the foregoing sections and acts, and in respect to all acts in amendment thereof or in addition thereto, and in respect to any other laws, are hereby conferred and imposed upon said State inspectors of health or such other officers as the State board of health may from time to time appoint: *Provided, however,* That neither said board of health nor any inspector thereof shall have authority to require structural alterations to be made in buildings, but shall report the necessity therefor to the inspection department of the district police. Wherever in said provisions of law the words "inspector" or "inspectors of factories and public buildings," "inspection department of the district police," "inspector" or "inspectors of the district police," "district police," "factory inspector" or "inspectors," and "member" or "members of the district police" occur, they shall be taken to mean State inspector or inspectors of health. Wherever the words "chief of the district police" occur, they shall be taken to mean the State board of health.

SEC. 6. The governor, with the advice and consent of the council, shall establish the salaries of said State inspectors of health, having regard in each district to the extent of territory, the number of inhabitants, the character of the business there carried on, and the amount of time likely to be required for the proper discharge of the duties. The salaries thus established shall be paid from the treasury of the Commonwealth monthly.

SEC. 7. There may be expended out of the treasury of the Commonwealth annually, for the purposes specified in this act, for salaries, a sum not exceeding twenty-five thousand dollars, and for other expenses, a sum not exceeding five thousand dollars.

SEC. 8. For the purpose of carrying out the provisions of this act the State board of health may employ from time to time experts in sanitation.

Approved June 19, 1907.

CHAPTER 577.—*Weekly day of rest.*

SECTION 1. Except in cases of emergency or except at the request of the employee, it shall not be lawful for any person, partnership, association or corporation to require an employee engaged in any commercial occupation, or in the work of any industrial process, or in the work of transportation or communication, to do on the Lord's day the usual work of his occupation, unless such employee is allowed during the six days next ensuing twenty-four consecutive hours without labor.

SEC. 2. This act shall not be construed as authorizing any work on the Lord's day not now authorized by law; nor as applying to farm or personal service, to druggists, to watchmen, to superintendents or managers, to janitors, or to persons engaged in the transportation, sale or delivery of milk, food or newspapers.

SEC. 3. Whoever violates the provisions of this act shall be punished by a fine of not more than fifty dollars for each offense.

Approved June 28, 1907.

MICHIGAN.

ACTS OF 1907.

ACT No. 124. *Guards to be placed on corn huskers.*

[See Bulletin No. 73, p. 882.]

ACT No. 140.—*Fire escapes on factories.*

[See Bulletin No. 73, pp. 878, 879.]

ACT No. 152.—*Iron foundries—Inspection, etc.*

[See Bulletin No. 73, pp. 882, 883.]

ACT No. 169.—*Factories and workshops—Inspection, etc.*

[See Bulletin No. 73, pp. 722, 879-881.]

ACT No. 234.—*Railroads—Safety appliances.*

SECTION 1. It shall hereafter be unlawful for any common carrier owning or operating any portion of a railroad wholly or partly in this State to haul or permit to be hauled or used on its line within this State any car used in moving traffic not equipped with couplers coupling automatically by impact, and which can be uncoupled without the necessity of men going between the ends of the cars: *Provided*, That nothing in this act contained shall apply to trains composed of four-wheeled cars or to trains composed of eight-wheeled standard logging cars where the height of such car from top of rail to center of coupling does not exceed twenty-five inches, or to locomotives used in hauling such trains when such cars or locomotives are exclusively used for the transportation of logs.

SEC. 2. Any such common carrier hauling or permitting to be hauled or used on its line any car in violation of the provisions of this act shall be liable to a penalty of not more than one hundred dollars for each and every such violation, to be recovered in an action of assumpsit brought in the name of the people of this State, and it shall be the duty of the prosecuting attorney of the proper county to bring any such action at the request of the commissioner of railroads.

SEC. 3. Act number one hundred forty-seven of the public acts of eighteen hundred eighty-five [secs. 5511, 5512, C. L.] and all other acts or parts of acts contravening any of the provisions of this act are hereby repealed.

Approved June 27, 1907.

ACT No. 252.—*Mattress factories—Hair picking machines.*

[See Bulletin No. 73, p. 883.]

ACT No. 281.—*Free public employment offices.*

SECTION 1. Free employment bureaus are hereby authorized to be created in cities in this State, having a population of thirty thousand or over, for the purpose of receiving applications of persons seeking employment, and applications of persons seeking to employ labor. Such bureaus shall be designated and known as Michigan free employment bureaus.

SEC. 2. The commissioner of labor shall organize, establish and control the free employment bureaus authorized by section one of this act: *Provided*, That not more than five such bureaus shall be established, and that no two thereof shall be located within a radius of twenty-five miles. No compensation or fee shall be charged or received, directly or indirectly, from persons applying for employment or help through any such bureau. It shall be the duty of said commissioner of labor to use all diligence in securing the cooperation of employers of labor with the purpose and objects of said employment bureaus. To this end it shall be competent for said commissioner to advertise in the columns of newspapers or to use other mediums, for such situations as he has applicants to fill, and for such help as may be called for by employers. He may also advertise in a general way for the cooperation of large contractors and employers, in such trade journals or special publications as reach such employers, whether such trade journals are published within the State of Michigan or not, and may pursue such other methods as, in his judgment, will best tend to accomplish the purpose of this act: *Provided further*, That one such bureau, as above provided for, shall be established at the city of Kalamazoo, and one at the city of Saginaw.

SEC. 3. When the commissioner of labor shall establish a free employment bureau under the provisions of this act, the board of State auditors shall provide a suitable office for the same, with necessary furniture, and all printing, binding, blanks, stationery and supplies shall be done and furnished under any contract which the State now has, or shall hereafter have, for similar work with any party or parties, and the expense thereof shall be, in the discretion of the board of State auditors, audited and paid for in the same manner as other State printing and supplies are paid for.

SEC. 4. Said commissioner of labor is authorized to appoint such assistants as may be necessary. All such assistants shall be under the control and direction of the commissioner of labor, and shall receive such compensation as he shall determine. All compensation for services and expenses provided for in this act shall be paid by the State treasurer upon the warrant of the auditor general, in the same manner as other salaries and expenses are paid.

SEC. 5. The sum of five thousand dollars, or so much thereof as may be deemed necessary by the commissioner of labor, is hereby appropriated annually for the fiscal year ending June thirty, nineteen hundred eight, and for each fiscal year thereafter, out of which shall be paid all salaries, advertising and contingent expenses authorized by sections two and four of this act.

SEC. 6. The auditor general is hereby directed to add to and incorporate in the State tax for the year nineteen hundred seven, the sum of five thousand dollars, and for each fiscal year thereafter the sum of five thousand dollars, which, when collected, shall be credited to the general fund to reimburse the same for the money hereby appropriated.

SEC. 7. Act number thirty-seven of the public acts of nineteen hundred five, entitled "An act to provide for the establishing and maintaining of free employment bureaus," approved March thirty, nineteen hundred five, is hereby repealed.

Approved June 27, 1907.

ACT NO. 313.—*Bureau of Labor.*

SECTION 1. Sections two and four of act number one hundred fifty-six of the public acts of eighteen hundred eighty-three, * * * are hereby amended to read as follows:

Section 2. The duties of such bureau shall be to collect in the manner herein provided, assort, systematize, print and present to the governor, * * * statistical details relating to all departments of labor in this State, including the penal institutions thereof, particularly concerning the hours of labor, the number of laborers and mechanics employed, with the nativity, age and sex of such laborers and mechanics, whether married or single, the daily wages earned and savings therefrom, the number and character of accidents, the sanitary conditions of establishments or institutions where labor is employed, the subjects of strikes, cooperation, labor difficulties, organized labor, their effects on labor and capital, with such other matter relating to the industrial, social, educational and sanitary conditions of the laboring classes and to the productive industries of the State, including the names of firms, companies or corporations where located, capital invested in grounds, buildings and machinery, the kinds of goods produced, or manufactured, the time operated each year, the amount paid annually for materials, rent, taxes, and insurance, the number of employees, male and female, the number engaged in clerical work and manual labor, with a classification of the number of each sex engaged in each occupation and the average daily wages paid each. The commissioner of labor is authorized to appoint special agents to represent the bureau, with authority to visit firms and establishments and to collect such statistics, and perform such other duties as may be required, with like power as if conferred on said commissioner: *Provided*, That the commissioner of labor nor any one connected with his office, shall not publish, make public, nor give to any individual or to the public the separate individual statistics obtained from any manufacturing establishment, but all such statistics must be published in connection with other similar statistics and given to the public in aggregates and averages.

Section 4. The compensation of such commissioner shall be two thousand dollars per annum, and that of his deputy fifteen hundred dollars per annum, which compensation, together with all necessary expenses, including the employment and the paying of the expenses, of such assistants as are provided for in section one of this act, also the expenses provided in section three of this act shall be audited and paid in the same manner as the salaries and expenses of other State officers: *Provided*, The amount thereof, exclusive of the compensation allowed to said commissioner and his deputy, shall not, in any one year, exceed the sum of ten thousand dollars: *And provided further*,. That in addition to the above allowance for expenses said bureau shall be authorized to have printed not to exceed four thousand copies of its annual reports for the use of the bureau, for general distribution, and all printing, binding, blanks or map work, and all supplies shall be done or furnished under any contract which the State now has or shall have for similar work with any party or parties, and the expense thereof shall be audited and paid in the same manner as other State printing.

Approved June 28, 1907.

CUMULATIVE INDEX OF LABOR LAWS AND DECISIONS RELATING THERETO.

[This index includes all labor laws enacted since January 1, 1904, and published in successive issues of the Bulletin, beginning with Bulletin No. 57, the issue of March, 1905 Laws enacted previously appear in the Tenth Special Report of the Commissioner of Labor. The decisions indexed under the various headings relate to the laws on the same subjects without regard to their date of enactment and are indicated by the letter "D" in parenthesis following the name of the State Opinions of the Attorney-General on the construction, etc , of labor laws are similarly indexed, and are indicated by the abbreviation "Op." in parenthesis]

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